Supplementary TABLE 2. CDR3 shared profile of baseline immunoglobulin heavy chain immune repertoire in rheumatoid arthritis patient specimens

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sample#/CDR3** | ARDLDY | ARNFGL | ARIGYSSSSFDY | ARGRDWFDP | ARGFDP | ARGDWFDP | ARDRWFDP | ARDFDY | VYLGDFYYGLTA | VVQHYYGGSGYFDF |
| **6** | 520 | 0 | 0 | 2747 | 0 | 0 | 0 | 0 | 0 | 0 |
| **4** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2872 | 0 | 5475 |
| **2** | 0 | 0 | 608 | 0 | 0 | 0 | 350 | 0 | 350 | 0 |
| **15** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **14** | 0 | 0 | 0 | 414 | 0 | 0 | 0 | 1056 | 0 | 0 |
| **33** | 0 | 0 | 0 | 0 | 7820 | 2855 | 341 | 0 | 0 | 0 |
| **31** | 746 | 0 | 0 | 0 | 0 | 338 | 0 | 373 | 0 | 0 |
| **3** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **40** | 0 | 0 | 0 | 2618 | 0 | 0 | 0 | 0 | 0 | 0 |
| **45** | 618 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **43** | 0 | 0 | 1271 | 0 | 1036 | 0 | 0 | 0 | 0 | 0 |
| **27** | 414 | 0 | 0 | 0 | 996 | 0 | 786 | 0 | 0 | 0 |
| **47** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **48** | 352 | 0 | 370 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **39** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **9** | 0 | 12381 | 0 | 0 | 0 | 0 | 0 | 0 | 12295 | 533 |
| **54** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **57** | 548 | 2435 | 0 | 0 | 0 | 308 | 0 | 0 | 0 | 0 |
| **1** | 605 | 554 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VTTWGVSTAAY | VSNSVGPSTGFDY | VRVRLGDARYKTFDQ | VRSYGVDV | VRSIDY | VRRYGHSGYHWFDP | VRRVQGAGDF | VRRTCSWYYWFDP | VRRNIQDTIDFVDYFYMDV |
| 0 | 0 | 0 | 0 | 0 | 0 | 4254 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 17811 | 0 | 0 | 0 | 0 |
| 2372 | 0 | 0 | 0 | 743 | 0 | 0 | 3479 | 0 |
| 0 | 0 | 0 | 31806 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1127 | 8578 | 1531 | 430 | 0 | 12992 | 894 | 3295 | 7545 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 15260 | 1293 | 0 | 0 | 7044 | 0 | 0 | 13843 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| VRQAPEMARGSVNWGPYFDH | VRPQSSSWFYFDY | VRHPEMTGSYFES | VRHPEMTGSYFDS | VRHPELTGSFFDY | VRHPEITGSFFDY | VRGREGFDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 6199 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8419 | 20000 | 1770 | 23886 | 1717 | 5329 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3372 | 4173 | 11280 | 11632 | 4198 | 11908 | 6926 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| VRGPNYGDRTDWLDP | VRGGGAEVFGP | VRELAYGSGSYIF | VREGDCGGDCKLHY | VRDWGAEGAY | VRDVRRGQPSNGESSDNEYFQN | VRDTYGLDY | VRDTPVEGASTLDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 2008 | 0 | 0 | 1350 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4373 | 3169 | 0 | 602 | 1938 | 0 | 37061 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2511 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1927 | 3863 | 2512 | 10660 | 6255 | 1608 | 15083 | 10970 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| VRDRRRSGSGSDS | VRDRAAAGPGGYFDS | VRDNYGYDY | VRDNYGLDV | VRDNYGLDF | VRDNWLVGDY | VRDLGIRDSGDGCSALCHWFDP | VRDFGGPNDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1440 |
| 15368 | 0 | 0 | 0 | 0 | 496 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 7782 | 46826 | 52634 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7882 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5687 | 6195 | 11977 | 26217 | 18877 | 9688 | 5455 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 8513 | 0 | 0 | 0 | 0 | 20271 | 0 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| VRDDGYQSFDY | VRDAYGLDY | VRDAQYGYTYAGYGMDV | VRCLRSVPDSFHI | VRAPNDAWHNFDY | VKSEVTIPEDV | VKPQSSSWFYFDY | VKPFGSYSYFYMDV |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 11235 | 0 | 2408 | 2319 | 389 | 7127 | 0 |
| 0 | 0 | 3128 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14179 | 5024 | 10755 | 8113 | 7408 | 369 | 860 | 10342 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 308 | 0 | 0 | 0 | 0 | 0 | 0 | 7322 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| VKETRGTTIYY | VKESYYYDSESYQNSFDS | VKENSEYFFDN | VKDTPREDAFEV | VKDRIELRYFEVGPFDH | VKDLSGTYYGFDY | VGGRGWLPDF | VGCSGGRCQSFWFEP |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 1976 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1041 |
| 894 | 0 | 1921 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 4790 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3390 | 705 | 15539 | 1686 | 9765 | 1049 | 0 | 1755 |
| 0 | 0 | 0 | 0 | 0 | 0 | 697 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 3368 | 0 | 4703 | 10690 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| VEQQPPEWTFDI | TTELGGRWDPFDI | TTDLRWEQWLVRDY | TTDLRWELSGPYY | TTDHLWPPGVY | TTDESPSFEWELPLDY | TTDEGNDYGYDY | TSDGVLIAYSAFDI |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3574 | 0 | 6955 | 0 | 5918 | 2559 | 3704 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 1310 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2667 | 13396 | 4095 | 3002 | 5773 | 5756 | 15152 | 2882 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 24430 | 0 | 0 | 0 | 6336 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| TRVRSSTP | TRLGEEGDVTKSFDY | TRHPVGDYYVSGSFYPIPFYYHMDV | TRGTLVAGGAFEI | TRGTLVAGGAFDI | TRGRYVAFDDYFDS | TRGALAAGGAFEI | TREWTTHFFGMDA |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6890 | 0 | 0 | 0 | 0 | 0 | 0 | 3240 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 1443 | 1018 | 5480 | 2788 | 734 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5971 | 6737 | 2848 | 4052 | 5601 | 1600 | 2262 | 1996 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 7280 | 0 | 0 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| TREAAPFSSDASSSAN | TRDYDGSGSSRGY | TRDVSSVGDY | TRDGLVAGNMEV | TRAPGGAGIDY | TRAKGGIAAADRITYGTDV | TRAIPATKGFDM | TLTMTTSSWFDP |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 3758 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1088 | 0 | 0 | 0 | 39805 | 0 | 2310 | 9809 |
| 0 | 0 | 9798 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2744 | 2219 | 15909 | 4990 | 800 | 9223 | 903 | 32584 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 3337 | 0 | 4939 | 0 | 0 | 0 | 0 |
|  |  |  |  |  |  |  |  |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| TLTKSTSSWFDP | TLTKSTFTYFDP | TKEGDY | TITPRSNPNHY | TADIIDTPMPNFAFDY | SRSRLGFNSGYDDDYFDF | SRQRKLFDSRGYSGYWYFDL | SRGRVALS |
| 0 | 0 | 0 | 0 | 0 | 1451 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 2548 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1425 | 13962 | 1921 | 0 | 938 | 0 | 0 | 0 |
| 0 | 0 | 0 | 5630 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5248 | 15014 | 14128 | 3441 | 2417 | 7150 | 7356 | 12364 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36260 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| SRGRIEVAGFDY | SRDGGLTGEEEDF | RTEEVSVTVDY | NTWTGTPLTDN | MVFGPNTAWDY | LRGTRGGALDV | LREMGDRADY | GRYDGPTDYFDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 2451 | 0 | 0 | 1036 | 0 | 0 | 1382 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 2788 | 0 |
| 3753 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20082 | 13353 | 421 | 21983 | 3708 | 5403 | 10454 | 1385 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 4056 | 8574 | 0 | 12343 | 0 | 0 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| GRSGSYLPFDY | GRRHASYGVIDH | GRQIWFYLASGSYGYFDP | GRDLNWSLFDS | GRAIGGFPVDY | GKGGYSVYDEIDH | GIVLSGNWNNEVDDAFDV | FHYLDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 46549 | 0 | 0 | 0 | 0 | 0 | 7128 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1535 | 0 |
| 0 | 0 | 752 | 0 | 5312 | 0 | 0 | 0 |
| 12123 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 340 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5326 | 17535 | 4104 | 6582 | 1548 | 7614 | 490 | 21734 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 10279 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ERGGGSSGGHWFDY | ELVHDAFDI | AYSLHTSGYYSVDWFAA | AVYGSGSYYDV | AVVTMVRGVIRDFDY | AVSSGWHLRLDALDI | AVRRDGYNGWFDP | AVLGAIGY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1868 | 7657 | 0 | 0 | 2851 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 991 | 3302 | 0 | 2204 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 6450 | 439 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3734 | 17681 | 4775 | 3088 | 15573 | 3579 | 20770 | 378 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ATWGSGFDY | ATSGYAGPWDYWYFDV | ATSAAHDAFEI | ATRRGYYDILTGLAFQH | ATQETRVPAATIEYFDY | ATLGAGITAAGSKFDY | ATINSDFDY | ATGYCSSTSCYPLGY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1004 | 18576 | 2764 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 3187 | 0 | 1682 | 1540 | 0 |
| 0 | 0 | 0 | 0 | 1817 | 0 | 0 | 473 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1144 | 7391 | 7391 | 1066 | 18877 | 16614 | 15134 | 1230 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ATGSGWYY | ATGIGYIDD | ATGGEWWDLVD | ATFASGYFDWQLIPPLDY | ATCPGFYDSCPFDY | ATASEWGFGFGPYYYYMNV | ASWNILSGYFDYFDH | ASVGYCTDATCRDAFDI |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 8586 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6533 | 0 | 2027 | 0 | 0 | 0 | 0 | 1266 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2925 | 843 | 2813 | 2632 | 4758 | 937 | 2701 | 3906 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 5021 | 7137 | 3265 | 1047 | 0 |

(continued)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ASTQFRTDSYDDF | ASSDNWNRHGDFDY | ASPYSSGWYRIDY | ASPLGVTRGDAFDV | ASIYSTSGRGWFDP | ASGWAYDY | ASGGNTPYCTSGVCYVH | ASFNYVYYGMDV |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 496 | 0 | 2062 | 0 | 0 | 0 | 0 | 0 |
| 0 | 5772 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 4949 | 3815 | 0 | 1921 |
| 0 | 0 | 0 | 1335 | 0 | 0 | 1141 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2770 | 369 | 18309 | 18894 | 4370 | 3295 | 1436 | 9292 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ASELGYGGWTYTFDF | ASEKEEAFDI | ASAIALPGTIDR | ASAGSTSWLQPEYIQH | ARYYYSSTGENWFGP | ARYYGGKGVDY | ARYLRSVLDAFHI | ARYHDYTQAAFDM |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 1630 | 0 | 0 | 0 | 896 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 637 | 0 | 0 | 2080 | 17299 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6408 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 808 | 1170 | 14326 | 5601 | 567 | 1213 | 5076 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 4877 | 0 | 38838 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARYGMVSPRRAFDV | ARVWVPVSIRGFLFDY | ARVTGAYLHWWFDP | ARVSGRFYGGNPWYSDL | ARVRRYYDSSAYPSPGAFDI | ARVPYYYGSGSYYEDY | ARVPGYVDAFDI |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2732 | 3499 | 0 | 1112 | 0 | 0 | 3369 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 301 | 0 | 637 | 1691 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4594 | 7150 | 1023 | 1170 | 6788 | 3674 | 1798 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARVNLLYYFDY | ARVMTTSPYYYMDV | ARVLRDTVMVSNLDV | ARVLDY | ARVIQYSSGWYPDHWFDP | ARVGTGSGYSQGFEY | ARVGIPVFQDNWFDS |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 2419 | 3661 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4869 | 0 | 0 | 0 | 0 | 0 | 2062 |
| 0 | 1631 | 0 | 363 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 667 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12880 | 1213 | 748 | 0 | 1643 | 13689 | 3114 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 985 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARVGGGNPYYYYGVDV | ARVFSADYWYFDL | ARVFNDYGYSNWFDP | ARVFGGDYFRNWYFDL | ARVESGYDNVWGTFPYYFDD | ARVDWYFDY | ARVARGFSGYSSAWYYDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 3279 |
| 1965 | 0 | 4471 | 0 | 1371 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 5356 | 0 | 460 | 0 | 7773 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10118 | 30097 | 7236 | 722 | 3553 | 679 | 1565 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ARTVGWLRPPDY | ARTVGGGGSPADY | ARTPARLDFSAMPEYFHL | ARTNYSSSYDY | ARTMSSRAFCGGDCYVNDY | ARTLYDSRWIDP | ARTLTTAPDTSYYFDY | ARTLLRSSGTFDL |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 2300 | 1360 | 0 | 1533 | 0 | 0 | 2592 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1195 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 760 | 0 | 2950 | 321 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3854 | 1221 | 7494 | 1419 | 1445 | 13723 | 9499 | 2796 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARTLGYNGYNIEGAFFDY | ARTKEYQLRLEY | ARTIAATGTQRHLDV | ARSYYDFWSGFPHDAFDI | ARSVEGHFDY | ARSTYYNGYFDF | ARSTVRDSDWSSGRWYYLDY |
| 0 | 0 | 0 | 0 | 764 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 1248 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1750 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 9430246 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 1124 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7537 | 413 | 0 | 877 | 1325 | 1488 | 5489 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7332 | 0 | 0 | 359 | 0 | 62889 | 0 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARSTGGSTGGFDY | ARSSRAALAN | ARSPLDMSSWYLDY | ARSNIWNPPLY | ARSLNYNRYYYYYYMDV | ARSLGVIVPAAMSYYYYMDV | ARSKNYYASGGNYYFDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 561 | 1306 | 1317 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2744 | 9597 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1572 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4087 | 7709 | 4783 | 791 | 1858 | 2366 | 1686 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 9509 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARSKGFLEWLWDY | ARSGYCSSTSCRLGWFDP | ARSGGTNVYPFYYMDV | ARSFLPGTTYYNGMDV | ARSAGCSTIGCYSIYFDN | ARRVASIFPAREGDSVRPERGAAYFYQSMDL | ARRTSSWYYWFDP |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6523 | 8499 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 360 | 0 |
| 0 | 0 | 1717 | 0 | 5197 | 0 | 13271 |
| 0 | 0 | 0 | 8835 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3923 | 481 | 2959 | 6935 | 1970 | 1824 | 886 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ARRSRGWYLDV | ARRSPYYDRSGYHFFDD | ARRPQSFYFDL | ARRPQSFYFDF | ARRLTYASGWFDY | ARRLAAAAAGGFDY | ARRGLFDY | ARRGGSSYDFGGAFDR |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 2019 | 0 | 0 | 0 | 0 | 0 | 3952 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3001 | 0 | 4232 | 8906 | 0 | 0 | 920 | 0 |
| 0 | 0 | 0 | 0 | 0 | 5123 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1901 | 4629 | 8001 | 5153 | 1935 | 10746 | 1264 | 843 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 24800 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ARRFDY | ARRDQQSAYAYSY | ARRDGDYERDY | ARQVSHFYYLEV | ARQTSGSTSPPAFDI | ARQTALHSFDI | ARQRYCSGCNWFDP | ARQRTLAGVFDY |
| 0 | 0 | 0 | 0 | 0 | 387 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3013 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 832 | 0 | 0 | 72121 | 0 |
| 329 | 4032 | 0 | 0 | 5816 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1764 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 645 | 378 | 2383 | 4026 | 6995 | 24186 | 20271 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 1180 | 0 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ARQRLRSPRAFDI | ARQRALAGIFDY | ARQQWLADRFDP | ARQFGSGSYIFSNFDY | ARQENYYYYYMDV | ARQEGRTDGSGSYRPFDS | ARPYGSSGYYRN | ARPVLDHYYGLDV |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2440 | 4017 | 2505 | 0 | 4147 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 841 | 0 | 1496 | 903 | 354 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5248 | 28178 | 6831 | 3252 | 14842 | 696 | 13448 | 4000 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARPTFPTRLGYRFDAFDI | ARPRGPSSSYRYMDV | ARPRGGEGGYFYMDV | ARPQSTCPKCAFDI | ARPQSSSWYYFDY | ARPQSSSWFYFDY | ARPQSSSWFYFDS |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8024 | 0 | 507 | 3715 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 3789 | 34015 | 15697 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1944 | 2426 | 1824 | 5773 | 5386 | 1471 | 1591 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 6284 | 0 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARPQDRYYSYYYMDV | ARPPNTAVADPFND | ARPNGDYDWGAYDI | ARPLAAAGTRRPPTYYYYYGMDV | ARPHTSGWHDAYDI | ARPGHVNPPD | ARPESSSIDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 4082 | 3607 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 398 | 0 | 0 | 584 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1041 | 8423 | 9258 | 4190 | 11891 | 335 | 404 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3922 | 0 | 0 | 0 | 0 | 451 | 23342 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARNPTGETALFDY | ARNEYSGHSGYFDY | ARMYYDSGTFEDWFDP | ARMGSGSTYGKYSD | ARLVVLKGFDY | ARLSWGGYNYDY | ARLSSVGGRVVSRGDPASRPNARQDYFDF |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1414 | 0 | 0 | 0 | 0 | 9245 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 15653 | 25099 | 1770 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 4092 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1075 | 11564 | 6349 | 59438 | 17707 | 3820 | 550 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 749 | 0 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ARLSGYSGIGSFDF | ARLRRAVPTMNYYFDF | ARLRGDHFANWFDP | ARLPVSLATFDY | ARLPITFGGVIVIGYFDY | ARLNYYMYSSSRFDP | ARLNYYDNFFDS | ARLMLWSYGMDV |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1163 |
| 0 | 3520 | 0 | 0 | 4406 | 5184 | 5119 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 5233 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3174 | 8234 | 5153 | 929 | 524 | 3407 | 533 | 912 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 2177 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ARLKGNYCSSTYCLNWFDP | ARLHDWNNLDF | ARLGSCTEKSCHMDY | ARLAYYGSGNYVFDL | ARKVAMDV | ARKGYHDYADDAFEI | ARKGVLTGSRFDP | ARKGNGDYYFDY |
| 819 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 2862 | 0 | 0 | 0 | 0 | 5897 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 1797 | 0 | 0 | 0 | 0 | 2974 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4852 | 4396 | 9576 | 1617 | 3329 | 13491 | 1075 | 2228 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 4138 | 2741 | 32923 | 0 | 0 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARKEVGYYNQYMDV | ARIREQQLDFDY | ARIPLYNYDSSGYYYAFDI | ARILDDILTGFDY | ARHYYGSSPDY | ARHYYGSGMYYNIRWFDP | ARHYTSGFYYIDN |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 1501 | 842 | 3369 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 458 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2469 | 4198 | 0 | 9266 | 1574 | 413 | 6091 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5545 | 0 | 0 | 0 | 2608 | 5576 | 13904 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARHPSRSISDAYCSSCCCYVFDL | ARHPSMTTVTYDF | ARHPRTGGLLSLNWFDP | ARHPPGGSSGYSAFDY | ARHPPGGSSGYSAFDF | ARHKPFWVLRGVTDY | ARHGWFDP |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 1576 | 0 | 0 | 691 | 10713 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 3585 | 0 | 10420 | 8224 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1213 | 3054 | 1006 | 12149 | 8767 | 808 | 30562 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5329 | 0 | 0 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARHGPYSSSWVQPFDS | ARHGGHSGSFYFDY | ARHDLVGAPGDAFDI | ARHAVPVTLLVVAPRPQLDP | ARHAGSGSYYYAFHT | ARGYCRGGSCYQLDY | ARGWFDP |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 766 | 1738 | 0 | 529 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 22974 | 0 | 0 | 1921 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 329 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 448 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3312 | 2770 | 13147 | 4370 | 3286 | 619 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21842 | 0 | 0 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARGWDNNGWYGRFDY | ARGVGATVEHGMDV | ARGVDYYGSGRYSISNWFDP | ARGVDY | ARGTYYYDSGIDY | ARGTRWQDY | ARGTPTWGRGVIIEGAQMDV |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1478 | 442 | 0 | 1115 | 991 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 346 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 301 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10609 | 18249 | 6100 | 0 | 14764 | 12286 | 628 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 11018 | 0 | 0 | 0 | 318 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARGTLIRGVIVRGPLPYYFDY | ARGSTVAQRTDVFDI | ARGSPPGYMDV | ARGRNFYSIAVAGTIGYDAFDI | ARGRLRADY | ARGRLDSSGYYPSYYYYCYMDV | ARGRGGELSSFDF |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 2581 | 8154 | 0 | 0 | 0 | 3888 |
| 0 | 0 | 0 | 0 | 9544 | 0 | 0 |
| 24931 | 0 | 0 | 0 | 0 | 7631 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1643 | 9335 | 3837 | 12209 | 6935 | 2761 | 2675 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 1078 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ARGPTRYYFDY | ARGPSYGSGSYYPDY | ARGPSGDSHGIDY | ARGPNYGDRSDYLNP | ARGPICSGTRCYGWFDP | ARGPFVPHDFDI | ARGPFGDYTNYFDY | ARGPFDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 310 |
| 0 | 12928 | 0 | 0 | 0 | 2451 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 2266 | 619 | 0 | 0 | 3780 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5069 | 0 | 0 | 0 | 0 | 0 | 0 | 315 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 4913 | 5721 | 2744 | 2323 | 688 | 5739 | 0 |
| 1573 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 4179 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARGPDYGDGRIDY | ARGPAPKTTVGWGPNWFDP | ARGMYYYGSGTYRAPYPYFDY | ARGMRFGESFNRFDS | ARGLYSSTWFPYY | ARGLVVVPAAKQDYYYMDV | ARGLVTAPGAFDV |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 6998 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 3240 | 2585 | 0 | 4515 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7107 | 5059 | 2228 | 1695 | 3966 | 4637 | 2237 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 318 | 6859 | 4929 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARGLTGMNFWSGPNYNWFDP | ARGLRYYDSSGYYEHHDAFDI | ARGLRFLEWLFGN | ARGLPVGSTTPEDYMDV | ARGLPTIAHNWFDA | ARGLNSSKWYEAY | ARGKRFDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 2181 | 0 | 324 | 11102 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 1947 | 0 | 0 | 0 | 0 | 0 |
| 304 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 593 | 8174 | 3854 | 851 | 13035 | 3217 | 2039 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 15301 | 0 | 0 | 349 |

(continued)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ARGIVGATFDD | ARGITMARGTWSFDY | ARGITGDY | ARGISCWD | ARGHYSRGYSFAS | ARGHYGMDV | ARGHFWGESYNKFDF | ARGGY | ARGGVGSFDA |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1274 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 793 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 14546 | 929 | 0 | 433 | 398 | 0 |
| 0 | 0 | 10534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 1509 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 4651 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18602 | 2899 | 3596 | 3751 | 10643 | 0 | 335 | 0 | 8982 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 513 | 51993 |

(continued)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ARGGSYFDY | ARGGSNHLFDI | ARGGPSSKYFDL | ARGGLTIFGVVTPSWFGP | ARGGISYNYGQNFLDS | ARGGHWYFDL | ARGGGRHYFYYFYMDL | ARGGGPPDY |
| 343 | 0 | 0 | 0 | 0 | 0 | 0 | 1362 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 752 | 0 | 11642 | 1655 | 752 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14151 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 374 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 492 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 2039 | 0 | 7408 | 10471 | 2090 | 550 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 13421 | 0 | 790 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARGGFHHGFDL | ARGGCSGAGCYSGIIYHVDV | ARGFYRYNWDGRGDV | ARGFRPFGSASYFPFDP | ARGFNYDLFSEGPGGFDP | ARGEYSGNAYLADYFDF | ARGDYNWNLPFD |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 2160 | 4870 | 1220 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 2664 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 430 | 4104 | 1462 | 3028 | 4362 | 481 | 4861 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1447 | 14151 | 2207 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARGDSTTWAQFDY | ARGDSSSEYVLVQTIDY | ARGDHSSSWYQAFDI | ARGAAHYYYGSGSGAFDI | ARFRLPLDS | AREVLDYGDNSYYDYGMDV | AREVFEAMATISGDYFDS |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 1933 | 0 | 0 | 2106 | 0 |
| 0 | 7050 | 0 | 0 | 0 | 0 | 0 |
| 3629 | 0 | 0 | 0 | 4727 | 0 | 1195 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 774 | 5868 | 1686 | 877 | 12269 | 4620 | 15874 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 15167 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| AREVDYGGESWYFDL | AREVDKVTPTSDAFDI | ARETSVPPGKAFDI | ARETNSANPFEN | ARESSTRFDY | ARERVSSSGYYYYYMDV | ARERTGYCSVRSCLRGWIDP |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 5540 | 0 | 0 | 3402 | 5043 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 619 | 3355 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18481 | 12579 | 11607 | 14102 | 1230 | 15935 | 800 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7209 | 0 | 0 | 0 | 0 | 0 | 4888 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARERLTVTTKVDGMDV | ARERGYRYGVWTGQHDAIDI | AREREPYSSVWPYVNWFDP | AREPLNIGATKFYDY | ARENRHCIGKTCLYWYFDF | AREMAYYGSGTLGGWFDP | ARELVSSYYYYGLDV |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4611 | 0 | 0 | 0 | 0 | 4060 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1071 |
| 0 | 0 | 1938 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 16308 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12949 | 2254 | 5825 | 1428 | 2185 | 17569 | 1652 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 8225 | 0 | 1622 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARELVPLYGMDV | ARELRTAAGRNWFDP | ARELRGCGGDCHDS | AREHGFDSWNGYSVPAWDYFDP | AREGYYYDSSGYERGGYFDY | AREGRWFGELQPNSWFDP | AREGRGVLGPSEDFDL |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2916 | 35608 | 0 | 0 | 410 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1525 |
| 0 | 0 | 15520 | 0 | 0 | 5462 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 507 | 6220 | 11211 | 5145 | 7571 | 7597 | 9447 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 8071 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| AREGQNVAFCGGDCYSPYDF | AREGPSGYKDY | AREGKDYFDIYNYGGFDI | AREGGSSGHAAYFDY | AREGGGYRFDY | AREFDY | AREDTAMALFDL | AREDTAMAIFDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 464 | 3369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 1669 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 1318 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 470 | 0 | 0 |
| 0 | 0 | 0 | 0 | 1064 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1944 | 2211 | 1101 | 1608 | 0 | 0 | 21717 | 15676 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 375 | 0 | 0 |
| 0 | 0 | 12004 | 0 | 0 | 0 | 38016 | 122594 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| AREASCSNTNCYIAY | AREAMEYDAFDI | AREALWDLRVGSWLDP | ARDYYGDYYFDY | ARDYIHDSSGYYDRREGAFHI | ARDYGDYFDY | ARDWVSSMNRGLVVGLVRFDP |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 1186 | 0 | 0 | 8331 | 0 |
| 2451 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 341 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 573 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 499 | 0 |
| 559 | 705 | 645 | 0 | 6702 | 0 | 14928 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 12169 | 0 | 0 | 8544 | 0 | 4138 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARDWDSGYSSSWSHFDY | ARDWAYSHES | ARDWAGPVAGTGDN | ARDVSGSGSYHLRGGHYYYNMDV | ARDVKYSSYYDYFYMDV | ARDTRNYFGSGSYGY | ARDTPSRYGDYGYFDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22346 | 0 | 56961 | 0 | 2214 | 0 | 5043 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 1088 | 0 | 1496 | 0 | 1248 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6057 | 4861 | 2770 | 301 | 3243 | 8010 | 12923 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ARDTGDTFDF | ARDSVEDDSAYFDF | ARDSTSGLWFGELEYYFDY | ARDSSAGISNTWHYFDP | ARDSPGDY | ARDSLLRGFDY | ARDSGYCSGGSCPLDY | ARDSGVGLDVLDI |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 619 | 2859 | 4922 | 199718 | 0 | 1558 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 338 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 335 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19032 | 2452 | 4870 | 2340 | 19557 | 2194 | 14291 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22767 | 0 | 0 | 0 | 0 | 11460 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARDSEVGLDALDV | ARDSDTSSRYSIFDI | ARDSAVAGLPYYMDV | ARDRYGDYGYGMDV | ARDRVLLSFGDLLSRSYYYYGMDV | ARDRRQWLWFDP | ARDRNNKNSFDP |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 3056 | 7193 | 1717 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1039 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1600 | 2194 | 10901 | 8457 | 8965 | 7597 | 6100 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 81682 | 0 | 0 | 0 | 862 | 31023 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ARDRLSGYSDY | ARDRIAVV | ARDRIAEGGWYDP | ARDRGSPYAFDI | ARDRDPFSSAWYRWFAP | ARDRDPFSGFGYYGMDV | ARDRDGAFDI | ARDQFRSLPGAGRYYYYYGMDV |
| 13980 | 0 | 0 | 0 | 0 | 0 | 365 | 0 |
| 0 | 0 | 0 | 7700 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 3390 | 0 | 1266 | 1930 | 0 | 424 |
| 0 | 7710 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3261 | 22732 | 4973 | 1634 | 3088 | 1307 | 2830 | 550 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ARDPSG | ARDPRYFRY | ARDPLGYNYGPGPFES | ARDPDY | ARDNYGSHDY | ARDMSSRYYYNPLGV | ARDLVATGLGMDV | ARDLSGSLEY | ARDLSGRDDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 2592 | 0 | 5508 | 0 | 2257 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 389 | 0 | 0 | 0 | 0 | 4665 | 0 | 938 | 0 |
| 0 | 11117 | 0 | 312 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 558 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 15943 | 2305 | 0 | 1213 | 10333 | 12002 | 1419 | 1385 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 394 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2824 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARDLSGAAATMFFHFGMDV | ARDLRSGGLTIKALDY | ARDLNWAFDY | ARDLLGVKDWFDP | ARDLGY | ARDLGSYCSSTSCYEEGNWFDP | ARDLGDY |
| 5871 | 0 | 0 | 310 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 761 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 837 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 945 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 381 |
| 0 | 0 | 0 | 0 | 305 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2770 | 2262 | 0 | 688 | 0 | 679 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 587 | 0 | 317 |
| 0 | 0 | 534 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARDLEIYSGDRWYDRLDP | ARDLAYSDFDY | ARDKSASYYRHYGMDL | ARDKRWVSGMDV | ARDKGLTSLDV | ARDKDPFSGFGYYGMDV | ARDIKFGSGRYFLSPLDN |
| 0 | 0 | 0 | 0 | 1816 | 0 | 0 |
| 0 | 0 | 2581 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 681 | 0 | 3656 | 0 | 20779 | 2594 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 378 | 0 | 1307 | 3717 | 1282 | 4474 | 456 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 2878 | 0 | 0 | 0 | 0 | 0 |
| 729 | 0 | 0 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARDHRVNLQWPQGIGIGFDI | ARDHDDYSDY | ARDGYFDY | ARDGSGMDV | ARDGSGDYINWFDP | ARDGRDVDYYDNSGASSMFGDVDS | ARDGMDILTGYFYGMDV |
| 0 | 0 | 1296 | 0 | 0 | 0 | 1052 |
| 356 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 304 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 16858 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 718 | 0 | 0 | 0 |
| 696 | 9146 | 0 | 0 | 671 | 21364 | 6367 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 5298 | 0 | 0 | 852 | 18043 | 0 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ARDGHGEYPIDY | ARDGGDY | ARDGGATNYGMDV | ARDFWGSYDY | ARDFSGSQGGDAFDI | ARDFLGSHDY | ARDFGRRGDSRRGVDH | ARDEVRCSSTSCHTGIFDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 1196 | 0 |
| 0 | 0 | 3186 | 723 | 388 | 5292 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2532 | 0 | 0 | 0 | 0 | 0 | 0 | 2824 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 1287 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 610 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8440 | 0 | 542 | 0 | 2383 | 19626 | 335 | 6427 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 605 | 0 | 0 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARDEALHGAWWY | ARDDLLGRGSGSSYYYGMDV | ARDAHPSYWYFDL | ARDAGGWYEDYS | ARDAEIQFTGYYGLGV | ARDADTHSQYSQFDH | ARAYSHSFAGNVDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1479 | 810 | 0 | 0 | 4546 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1770 |
| 0 | 0 | 0 | 2003 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1565 | 3192 | 1514 | 7459 | 11460 | 1445 | 9817 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 9324 | 0 | 0 | 93748 | 0 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARAYGDYIFHYNYYMDV | ARAVRWQLAYYFED | ARAVGFCSGATCHANPPLDYFMDV | ARATVGLGDDFGNDS | ARASPPPSGSYGDDAFDI | ARARSWNDFDYYYYMDV | ARARGSHVLDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 1285 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 504 | 2195 | 0 | 0 | 442 | 0 |
| 0 | 0 | 0 | 0 | 777 | 0 | 3077 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 765 | 3071 | 963 | 1815 | 826 | 1918 | 14954 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 790 | 0 | 0 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ARARFPFYSSSSDWFDP | ARAPGGQFLPYYHYYIDV | ARALYAPFFDY | ARALSGYNYVPFDY | ARALNKYYYDNFGY | ARAKLVFEF | ARAIWRREPPIHHSSYMDV |
| 0 | 0 | 0 | 0 | 0 | 2381 | 0 |
| 0 | 723 | 0 | 3380 | 2656 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1402 | 10221 | 3235 | 843 | 4465 | 5274 | 817 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 585 | 0 | 12744 | 0 | 0 | 0 | 934 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ARAIREDYRAEDTDY | ARAHGITMIVDDY | ARAGNSGSYYYWFDP | ARAGGSYCGVECYYENDH | ARADGGSGPHNDY | ARAAGAAGIDY | APYSTTYGWFDP | APWFGESRFDP |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 12781 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 2381 | 1434 | 9712 | 0 | 416 |
| 7220 | 0 | 0 | 0 | 0 | 0 | 2274 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8165 | 395 | 4069 | 8139 | 5678 | 2873 | 2331 | 421 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 318 | 0 | 0 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ANSNSHNWFDP | AMYLPGGSGKGV | ALTMTTSSWFDP | AKYNSGRDVYYYYYYMDF | AKVSGRTFDY | AKVRISGYSSFDY | AKVRHDYGVEDAFDI | AKVPRDTDGSYVDDFYFDH |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1782 | 0 | 0 | 0 | 4125 | 0 | 5853 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 1274 | 6781 | 2319 | 0 | 336 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4336 | 4749 | 5773 | 352 | 15754 | 1325 | 1583 | 1548 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8246 |

(continued)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| AKVLYYYDSSGLDY | AKVKGYYDSDVFDI | AKVGKMVRGVLHPLFDS | AKVFRNTAMVGY | AKTLPDTSGYHKPPIDY | AKTGQLDS | AKTGQFDS | AKTARLLDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 4363 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 2824 | 1102 | 0 |
| 0 | 0 | 0 | 0 | 5108 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 339 |
| 305 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1084 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 800 | 4147 | 6005 | 1006 | 6633 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 351 | 1394 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 12836 | 718 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| AKSVIVQYYYYYGMDV | AKSVERDSFYYYLYGMDV | AKSPLAYIGSYYSRSYYFDY | AKSDGYNVVENWFDP | AKSDGYNLVENWFDP | AKRVAVSGTQHSRAFDI | AKRILAAGPNFDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 699 | 0 | 451 | 1372 | 3603 | 19982 | 3886 |
| 0 | 9029 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6160 | 2589 | 335 | 2546 | 11159 | 9980 | 3691 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| AKRAHDNSTDWFDS | AKPPYGGSYWDAFNI | AKPNGAGNTYGPNPFDY | AKPIVVGGTSYFYYGMDV | AKPFAHCSTTNSCPSGVYALDI | AKPDSGSIAAASYFRY | AKNGAYCSGDCSFFFDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1674 | 0 | 0 | 0 | 486 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 2186 | 0 | 0 | 0 | 858 | 0 |
| 0 | 0 | 0 | 3838 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 963 | 13250 | 3605 | 9172 | 2262 | 2004 | 2486 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 1222 | 0 | 0 | 0 | 1109 |

(continued)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| AKMGRLAAAGDFDY | AKMGQWPLSAFGD | AKMDRLSLRDRVDWFDP | AKKTPGYSNTLGLAFDI | AKHPGIIVSAREPFDM | AKGVGYGSFDY | AKGTIYFDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1641 | 1609 | 0 | 0 | 0 | 0 | 950 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 752 | 1894 | 0 | 725 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14988 | 13267 | 2624 | 12372 | 1746 | 2598 | 8896 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 2331 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| AKGSTLGSGNYGPIDY | AKGSDFDL | AKGRSETPAAAANY | AKGRRSSGGYLSEYFDY | AKGNTGYNFGLEDP | AKGLRYFDY | AKGKSYGGYAFRASDV | AKGKQSYSYYFYYMDV |
| 0 | 0 | 0 | 0 | 0 | 1395 | 0 | 0 |
| 0 | 1069 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 2782 | 0 | 0 | 0 |
| 0 | 0 | 2319 | 371 | 0 | 0 | 0 | 0 |
| 1783 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1617 | 559 | 499 | 2116 | 1522 | 9800 | 2400 | 8199 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 6839 | 1335 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| AKGGWGTVLDY | AKGGTTSFYYYYYYMDV | AKGGNSFDF | AKGGLVRGLHFDS | AKGGDYGGNQFNY | AKGGASGSIRNYFDC | AKFSQYSYDTSGYSRQDSVDI |
| 775 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 1706 | 1944 | 0 | 35274 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 5294 | 0 | 0 | 460 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2687 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 4895 | 2787 | 14498 | 679 | 1041 | 2168 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 5874 | 0 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| AKEVASVPNTGLDV | AKESWGSCRGGSCHTFDY | AKESGRDAFDI | AKEHRYSGYDYFDY | AKEGYTYGYADY | AKEGVFLWVGEQNYYGLDV | AKEGGYDSSGYYWFDY |
| 0 | 0 | 0 | 387 | 0 | 0 | 0 |
| 0 | 1047 | 3358 | 0 | 442 | 5270 | 734 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1221 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2013 | 1084 | 10230 | 11968 | 6565 | 2848 | 3587 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| AKEAHYYFED | AKDYPDGALLDAPIPFFDY | AKDYGSGRRDDNYGLDV | AKDTPGQYSSGWVEYLQH | AKDSPFDY | AKDSDQVQEAFDI | AKDRTETTLGDYYYYGMDV |
| 0 | 0 | 0 | 2160 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 745 | 0 |
| 11657 | 0 | 2267 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 681 |
| 0 | 2612 | 0 | 0 | 338 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 3218 | 0 | 0 |
| 456 | 3286 | 610 | 4697 | 0 | 3828 | 533 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| AKDRLGEQQPSDY | AKDRHSGSGGLFES | AKDRGYYGHGGQYSSGENFFDS | AKDRGIAAADIYYGMDV | AKDREGAVADYFDC | AKDRDYYGSGSYYDY | AKDRDIQTGDLDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1674 | 702 | 0 | 0 | 0 | 1814 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 717 | 1133 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 671 | 326 | 3415 | 9258 | 2435 | 1652 | 1195 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 6726 | 0 | 0 | 0 | 7085 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| AKDRDAFNSHFYGMDV | AKDRAPYHDSSSSYYGKSYFDY | AKDPLVLGELSPHFDY | AKDNYYDNTGYFEY | AKDMSGYGPVNY | AKDLYSNYANSGGFDI | AKDLYGDYVGDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 896 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2868 | 681 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 321 | 4497 | 3390 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1264 | 912 | 1884 | 7494 | 610 | 860 | 4723 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 2495 | 0 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| AKDLVRVSYGFEDAFDV | AKDLRIAVAFDALDT | AKDLRIAVAFDAFDI | AKDLMAVHKYFDY | AKDLGYYGSGTPLHY | AKDLGY | AKDLDY | AKDKTYRYTVFDY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 6296 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 3444 | 12660 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 1792 | 0 | 465 | 0 | 7727 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 333 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 312 | 0 |
| 963 | 13164 | 1944 | 11280 | 318 | 0 | 0 | 6375 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 500 | 0 | 0 |
| 10844 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| AKDKGGHSYYNYYMDV | AKDITSDY | AKDILWFGDPHAFDI | AKDIGYSGYGWGYYFNN | AKDIDAVAGALSGGYYGMDV | AKDHSYFYDSSGYYFDY | AKDHSGDYPSY |
| 0 | 0 | 0 | 3146 | 0 | 2980 | 0 |
| 0 | 0 | 0 | 0 | 4406 | 0 | 2419 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 363 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10299 | 585 | 533 | 17630 | 14248 | 5945 | 16227 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19357 | 0 | 462 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| AKDHDYYDSSGYYDY | AKDFQYSGGLNSFDP | AKDDCSSTSCIYYYMDV | AKDAATDISGFSPLDY | AKAHSSGWYYFDY | AKAGHYCSSTSCYPHLGPYYYYGMDV | AKADYYESSGYIY |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 507 | 0 | 0 | 1414 | 313 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 1673 | 0 | 1159 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 338 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 748 | 671 | 3174 | 2125 | 0 | 955 | 1996 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 336 | 0 | 0 |
| 441 | 0 | 0 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| AKADVKGGVVINYFDY | AIRSMVPAGTDYFDY | AILYGDPKYYYYYYGMDV | AILYGDPKYYYYYYGLDV | AHSYTTGTHLFLQH | AHSRITMFRGILDYGMDV | AHSQTFEI |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6825 | 0 | 0 | 0 | 0 | 0 | 10584 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 1894 | 11934 | 770 | 991 | 513 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4887 | 4121 | 12674 | 10359 | 5472 | 6547 | 14954 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| AHSIWGEWLVFNY | AHSGQCGRHYCYMDV | AHRVPLRSGWYHDAFDV | AHRQQRGQWLVPYFDY | AHRPQSFYFDY | AHHQNYYESSGYYFDH | AGYRLGAFDI |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3107 | 380 | 43019 | 0 | 867 | 1593 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 11540 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8337 | 6625 | 765 | 2632 | 3717 | 4396 | 1092 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 4826 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| AGTPYCSGGSCYKEDY | AGSESYYYFDY | AGITGTVVWPGWFDP | AGHYAFWSAEY | AGHVSGTYYRIEY | AGEDGRSYGSLDY | AGAVYSSGYYGYYYYMDV |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 669 | 0 | 23058 | 0 | 3596 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 2143 |
| 1443 | 0 | 0 | 0 | 4577 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2891 | 2452 | 1505 | 18120 | 12785 | 15668 | 14059 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 492 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| AGAVDTALVPDN | AEDASGSLGRGDN | ACRRVAAAGQEFDP | AATISAEYGSGSYYGMDV | AASFDY | AADVLTGLHYFDY | AADIDYFFDY |
| 0 | 0 | 0 | 2514 | 0 | 0 | 0 |
| 0 | 2635 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2328 | 0 | 301 | 0 | 0 | 0 | 2036 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 485 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 352 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17733 | 4870 | 1299 | 404 | 0 | 3863 | 1385 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 3183 | 0 |

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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CDR3 Sequence/Sample#** | 6 | 4 | 2 | 15 | 14 | 33 | 31 | 3 | 40 | 45 | 43 | 27 | 47 | 48 | 39 | 9 | 54 | 57 | 1 |
| ARDLDY | 520 | 0 | 0 | 0 | 0 | 0 | 746 | 0 | 0 | 618 | 0 | 414 | 0 | 352 | 0 | 0 | 0 | 548 | 605 |
| ARNFGL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12381 | 0 | 2435 | 554 |
| ARIGYSSSSFDY | 0 | 0 | 608 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1271 | 0 | 0 | 370 | 0 | 0 | 0 | 0 | 0 |
| ARGRDWFDP | 2747 | 0 | 0 | 0 | 414 | 0 | 0 | 0 | 2618 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARGFDP | 0 | 0 | 0 | 0 | 0 | 7820 | 0 | 0 | 0 | 0 | 1036 | 996 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARGDWFDP | 0 | 0 | 0 | 0 | 0 | 2855 | 338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 308 | 0 |
| ARDRWFDP | 0 | 0 | 350 | 0 | 0 | 341 | 0 | 0 | 0 | 0 | 0 | 786 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARDFDY | 0 | 2872 | 0 | 0 | 1056 | 0 | 373 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VYLGDFYYGLTA | 0 | 0 | 350 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12295 | 0 | 0 | 0 |
| VVQHYYGGSGYFDF | 0 | 5475 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 533 | 0 | 0 | 0 |
| VTTWGVSTAAY | 0 | 0 | 0 | 2372 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1127 | 0 | 0 | 0 |
| VSNSVGPSTGFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8578 | 0 | 0 | 15260 |
| VRVRLGDARYKTFDQ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1531 | 0 | 0 | 1293 |
| VRSYGVDV | 0 | 0 | 0 | 0 | 31806 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 430 | 0 | 0 | 0 |
| VRSIDY | 0 | 0 | 17811 | 743 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VRRYGHSGYHWFDP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12992 | 0 | 0 | 7044 |
| VRRVQGAGDF | 4254 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 894 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VRRTCSWYYWFDP | 0 | 0 | 0 | 3479 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3295 | 0 | 0 | 0 |
| VRRNIQDTIDFVDYFYMDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7545 | 0 | 0 | 13843 |
| VRQAPEMARGSVNWGPYFDH | 0 | 0 | 0 | 8419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3372 | 0 | 0 | 0 |
| VRPQSSSWFYFDY | 0 | 0 | 0 | 20000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4173 | 0 | 0 | 0 |
| VRHPEMTGSYFES | 0 | 0 | 0 | 1770 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11280 | 0 | 0 | 0 |
| VRHPEMTGSYFDS | 0 | 0 | 0 | 23886 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11632 | 0 | 0 | 0 |
| VRHPELTGSFFDY | 0 | 0 | 0 | 1717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4198 | 0 | 0 | 0 |
| VRHPEITGSFFDY | 0 | 0 | 0 | 5329 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11908 | 0 | 0 | 0 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VRGREGFDY | 0 | 6199 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6926 | 0 | 0 | 0 |
| VRGPNYGDRTDWLDP | 0 | 0 | 0 | 4373 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1927 | 0 | 0 | 0 |
| VRGGGAEVFGP | 0 | 0 | 0 | 3169 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3863 | 0 | 0 | 0 |
| VRELAYGSGSYIF | 0 | 2008 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2512 | 0 | 0 | 0 |
| VREGDCGGDCKLHY | 0 | 0 | 0 | 602 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10660 | 0 | 0 | 0 |
| VRDWGAEGAY | 0 | 0 | 0 | 1938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6255 | 0 | 0 | 0 |
| VRDVRRGQPSNGESSDNEYFQN | 0 | 1350 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1608 | 0 | 0 | 0 |
| VRDTYGLDY | 0 | 0 | 0 | 37061 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15083 | 0 | 0 | 0 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VRDTPVEGASTLDY | 0 | 0 | 0 | 0 | 2511 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10970 | 0 | 0 | 0 |
| VRDRRRSGSGSDS | 0 | 15368 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5687 | 0 | 0 | 0 |
| VRDRAAAGPGGYFDS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6195 | 0 | 0 | 8513 |
| VRDNYGYDY | 0 | 0 | 0 | 7782 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11977 | 0 | 0 | 0 |
| VRDNYGLDV | 0 | 0 | 0 | 46826 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26217 | 0 | 0 | 0 |
| VRDNYGLDF | 0 | 0 | 0 | 52634 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18877 | 0 | 0 | 0 |
| VRDNWLVGDY | 0 | 496 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9688 | 0 | 0 | 0 |
| VRDLGIRDSGDGCSALCHWFDP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5455 | 0 | 0 | 20271 |
| VRDFGGPNDY | 1440 | 0 | 0 | 0 | 0 | 7882 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VRDDGYQSFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14179 | 0 | 0 | 308 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VRDAYGLDY | 0 | 0 | 0 | 11235 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5024 | 0 | 0 | 0 |
| VRDAQYGYTYAGYGMDV | 0 | 0 | 0 | 0 | 3128 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10755 | 0 | 0 | 0 |
| VRCLRSVPDSFHI | 0 | 0 | 0 | 2408 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8113 | 0 | 0 | 0 |
| VRAPNDAWHNFDY | 0 | 0 | 0 | 2319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7408 | 0 | 0 | 0 |
| VKSEVTIPEDV | 0 | 0 | 0 | 389 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 369 | 0 | 0 | 0 |
| VKPQSSSWFYFDY | 0 | 0 | 0 | 7127 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 860 | 0 | 0 | 0 |
| VKPFGSYSYFYMDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10342 | 0 | 0 | 7322 |
| VKETRGTTIYY | 0 | 0 | 0 | 894 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3390 | 0 | 0 | 0 |
| VKESYYYDSESYQNSFDS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 705 | 0 | 0 | 3368 |
| VKENSEYFFDN | 0 | 0 | 0 | 1921 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15539 | 0 | 0 | 0 |
| VKDTPREDAFEV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1686 | 0 | 0 | 4703 |

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| VKDRIELRYFEVGPFDH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9765 | 0 | 0 | 10690 |
| VKDLSGTYYGFDY | 0 | 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1049 | 0 | 0 | 0 |
| VGGRGWLPDF | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4790 | 0 | 0 | 697 | 0 | 0 |
| VGCSGGRCQSFWFEP | 0 | 0 | 1041 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1755 | 0 | 0 | 0 |
| VEQQPPEWTFDI | 0 | 3574 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2667 | 0 | 0 | 0 |
| TTELGGRWDPFDI | 0 | 0 | 0 | 1310 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13396 | 0 | 0 | 0 |
| TTDLRWEQWLVRDY | 0 | 6955 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4095 | 0 | 0 | 0 |
| TTDLRWELSGPYY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3002 | 0 | 0 | 24430 |
| TTDHLWPPGVY | 0 | 5918 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5773 | 0 | 0 | 0 |

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| TTDESPSFEWELPLDY | 0 | 2559 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5756 | 0 | 0 | 0 |
| TTDEGNDYGYDY | 0 | 3704 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15152 | 0 | 0 | 0 |
| TSDGVLIAYSAFDI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2882 | 0 | 0 | 6336 |
| TRVRSSTP | 0 | 6890 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5971 | 0 | 0 | 0 |
| TRLGEEGDVTKSFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6737 | 0 | 0 | 7280 |
| TRHPVGDYYVSGSFYPIPFYYHMDV | 0 | 0 | 0 | 1443 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2848 | 0 | 0 | 0 |
| TRGTLVAGGAFEI | 0 | 0 | 0 | 1018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4052 | 0 | 0 | 0 |
| TRGTLVAGGAFDI | 0 | 0 | 0 | 5480 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5601 | 0 | 0 | 0 |
| TRGRYVAFDDYFDS | 0 | 0 | 0 | 2788 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1600 | 0 | 0 | 0 |

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| TRGALAAGGAFEI | 0 | 0 | 0 | 734 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2262 | 0 | 0 | 0 |
| TREWTTHFFGMDA | 0 | 3240 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1996 | 0 | 0 | 0 |
| TREAAPFSSDASSSAN | 0 | 0 | 0 | 1088 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2744 | 0 | 0 | 0 |
| TRDYDGSGSSRGY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2219 | 0 | 0 | 3337 |
| TRDVSSVGDY | 0 | 0 | 0 | 0 | 9798 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15909 | 0 | 0 | 0 |
| TRDGLVAGNMEV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4990 | 0 | 0 | 4939 |
| TRAPGGAGIDY | 0 | 0 | 0 | 39805 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 800 | 0 | 0 | 0 |
| TRAKGGIAAADRITYGTDV | 0 | 3758 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9223 | 0 | 0 | 0 |
| TRAIPATKGFDM | 0 | 0 | 0 | 2310 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 903 | 0 | 0 | 0 |
| TLTMTTSSWFDP | 0 | 0 | 0 | 9809 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32584 | 0 | 0 | 0 |
| TLTKSTSSWFDP | 0 | 0 | 0 | 1425 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5248 | 0 | 0 | 0 |

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| TLTKSTFTYFDP | 0 | 0 | 0 | 13962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15014 | 0 | 0 | 0 |
| TKEGDY | 0 | 0 | 0 | 1921 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14128 | 0 | 0 | 0 |
| TITPRSNPNHY | 0 | 0 | 0 | 0 | 5630 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3441 | 0 | 0 | 0 |
| TADIIDTPMPNFAFDY | 0 | 0 | 0 | 938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2417 | 0 | 0 | 0 |
| SRSRLGFNSGYDDDYFDF | 1451 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7150 | 0 | 0 | 0 |
| SRQRKLFDSRGYSGYWYFDL | 0 | 2548 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7356 | 0 | 0 | 0 |
| SRGRVALS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12364 | 0 | 0 | 36260 |
| SRGRIEVAGFDY | 0 | 0 | 0 | 0 | 3753 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20082 | 0 | 0 | 0 |
| SRDGGLTGEEEDF | 0 | 2451 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13353 | 0 | 0 | 0 |
| RTEEVSVTVDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 421 | 0 | 0 | 4056 |
| NTWTGTPLTDN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21983 | 0 | 0 | 8574 |

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| MVFGPNTAWDY | 0 | 1036 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3708 | 0 | 0 | 0 |
| LRGTRGGALDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5403 | 0 | 0 | 12343 |
| LREMGDRADY | 0 | 0 | 0 | 2788 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10454 | 0 | 0 | 0 |
| GRYDGPTDYFDY | 0 | 1382 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1385 | 0 | 0 | 0 |
| GRSGSYLPFDY | 0 | 0 | 0 | 0 | 12123 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5326 | 0 | 0 | 0 |
| GRRHASYGVIDH | 0 | 46549 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17535 | 0 | 0 | 0 |
| GRQIWFYLASGSYGYFDP | 0 | 0 | 0 | 752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4104 | 0 | 0 | 0 |
| GRDLNWSLFDS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6582 | 0 | 0 | 10279 |
| GRAIGGFPVDY | 0 | 0 | 0 | 5312 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1548 | 0 | 0 | 0 |
| GKGGYSVYDEIDH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 340 | 0 | 0 | 0 | 7614 | 0 | 0 | 0 |
| GIVLSGNWNNEVDDAFDV | 0 | 0 | 1535 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 490 | 0 | 0 | 0 |

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| FHYLDY | 0 | 7128 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21734 | 0 | 0 | 0 |
| ERGGGSSGGHWFDY | 0 | 1868 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3734 | 0 | 0 | 0 |
| ELVHDAFDI | 0 | 7657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17681 | 0 | 0 | 0 |
| AYSLHTSGYYSVDWFAA | 0 | 0 | 0 | 991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4775 | 0 | 0 | 0 |
| AVYGSGSYYDV | 0 | 0 | 0 | 3302 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3088 | 0 | 0 | 0 |
| AVVTMVRGVIRDFDY | 0 | 2851 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15573 | 0 | 0 | 0 |
| AVSSGWHLRLDALDI | 0 | 0 | 0 | 2204 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3579 | 0 | 0 | 0 |
| AVRRDGYNGWFDP | 0 | 0 | 0 | 0 | 6450 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20770 | 0 | 0 | 0 |
| AVLGAIGY | 0 | 0 | 0 | 0 | 439 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 378 | 0 | 0 | 0 |
| ATWGSGFDY | 0 | 1004 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1144 | 0 | 0 | 0 |
| ATSGYAGPWDYWYFDV | 0 | 18576 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7391 | 0 | 0 | 0 |

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| ATSAAHDAFEI | 0 | 2764 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7391 | 0 | 0 | 0 |
| ATRRGYYDILTGLAFQH | 0 | 0 | 0 | 3187 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1066 | 0 | 0 | 0 |
| ATQETRVPAATIEYFDY | 0 | 0 | 0 | 0 | 1817 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18877 | 0 | 0 | 0 |
| ATLGAGITAAGSKFDY | 0 | 0 | 0 | 1682 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16614 | 0 | 0 | 0 |
| ATINSDFDY | 0 | 0 | 0 | 1540 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15134 | 0 | 0 | 0 |
| ATGYCSSTSCYPLGY | 0 | 0 | 0 | 0 | 473 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1230 | 0 | 0 | 0 |
| ATGSGWYY | 0 | 0 | 0 | 6533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2925 | 0 | 0 | 0 |
| ATGIGYIDD | 0 | 8586 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 843 | 0 | 0 | 0 |
| ATGGEWWDLVD | 0 | 0 | 0 | 2027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2813 | 0 | 0 | 0 |
| ATFASGYFDWQLIPPLDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2632 | 0 | 0 | 5021 |
| ATCPGFYDSCPFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4758 | 0 | 0 | 7137 |

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| ATASEWGFGFGPYYYYMNV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 937 | 0 | 0 | 3265 |
| ASWNILSGYFDYFDH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2701 | 0 | 0 | 1047 |
| ASVGYCTDATCRDAFDI | 0 | 0 | 0 | 1266 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3906 | 0 | 0 | 0 |
| ASTQFRTDSYDDF | 0 | 496 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2770 | 0 | 0 | 0 |
| ASSDNWNRHGDFDY | 0 | 0 | 5772 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 369 | 0 | 0 | 0 |
| ASPYSSGWYRIDY | 0 | 2062 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18309 | 0 | 0 | 0 |
| ASPLGVTRGDAFDV | 0 | 0 | 0 | 0 | 1335 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18894 | 0 | 0 | 0 |
| ASIYSTSGRGWFDP | 0 | 0 | 0 | 4949 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4370 | 0 | 0 | 0 |
| ASGWAYDY | 0 | 0 | 0 | 3815 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3295 | 0 | 0 | 0 |
| ASGGNTPYCTSGVCYVH | 0 | 0 | 0 | 0 | 1141 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1436 | 0 | 0 | 0 |
| ASFNYVYYGMDV | 0 | 0 | 0 | 1921 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9292 | 0 | 0 | 0 |

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| ASELGYGGWTYTFDF | 0 | 0 | 0 | 0 | 0 | 6408 | 0 | 0 | 0 | 0 | 338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ASEKEEAFDI | 0 | 1630 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 808 | 0 | 0 | 0 |
| ASAIALPGTIDR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1170 | 0 | 0 | 4877 |
| ASAGSTSWLQPEYIQH | 0 | 0 | 0 | 637 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14326 | 0 | 0 | 0 |
| ARYYYSSTGENWFGP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5601 | 0 | 0 | 38838 |
| ARYYGGKGVDY | 0 | 896 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 567 | 0 | 0 | 0 |
| ARYLRSVLDAFHI | 0 | 0 | 0 | 2080 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1213 | 0 | 0 | 0 |
| ARYHDYTQAAFDM | 0 | 0 | 0 | 17299 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5076 | 0 | 0 | 0 |
| ARYGMVSPRRAFDV | 0 | 2732 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4594 | 0 | 0 | 0 |
| ARVWVPVSIRGFLFDY | 0 | 3499 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7150 | 0 | 0 | 0 |
| ARVTGAYLHWWFDP | 0 | 0 | 0 | 301 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1023 | 0 | 0 | 0 |

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| ARVSGRFYGGNPWYSDL | 0 | 1112 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1170 | 0 | 0 | 0 |
| ARVRRYYDSSAYPSPGAFDI | 0 | 0 | 0 | 637 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6788 | 0 | 0 | 0 |
| ARVPYYYGSGSYYEDY | 0 | 0 | 0 | 1691 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3674 | 0 | 0 | 0 |
| ARVPGYVDAFDI | 0 | 3369 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1798 | 0 | 0 | 0 |
| ARVNLLYYFDY | 0 | 0 | 0 | 4869 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12880 | 0 | 0 | 0 |
| ARVMTTSPYYYMDV | 0 | 0 | 0 | 0 | 1631 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1213 | 0 | 0 | 0 |
| ARVLRDTVMVSNLDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 748 | 0 | 0 | 985 |
| ARVLDY | 0 | 0 | 0 | 0 | 363 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 667 | 0 | 0 | 0 | 0 | 0 |
| ARVIQYSSGWYPDHWFDP | 0 | 2419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1643 | 0 | 0 | 0 |
| ARVGTGSGYSQGFEY | 0 | 3661 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13689 | 0 | 0 | 0 |
| ARVGIPVFQDNWFDS | 0 | 0 | 0 | 2062 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3114 | 0 | 0 | 0 |

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| ARVGGGNPYYYYGVDV | 0 | 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10118 | 0 | 0 | 0 |
| ARVFSADYWYFDL | 0 | 0 | 0 | 5356 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30097 | 0 | 0 | 0 |
| ARVFNDYGYSNWFDP | 0 | 4471 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7236 | 0 | 0 | 0 |
| ARVFGGDYFRNWYFDL | 0 | 0 | 0 | 460 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 722 | 0 | 0 | 0 |
| ARVESGYDNVWGTFPYYFDD | 0 | 1371 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3553 | 0 | 0 | 0 |
| ARVDWYFDY | 0 | 0 | 0 | 7773 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 679 | 0 | 0 | 0 |
| ARVARGFSGYSSAWYYDY | 3279 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1565 | 0 | 0 | 0 |
| ARTVGWLRPPDY | 0 | 0 | 0 | 1195 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3854 | 0 | 0 | 0 |
| ARTVGGGGSPADY | 0 | 2300 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1221 | 0 | 0 | 0 |
| ARTPARLDFSAMPEYFHL | 0 | 1360 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7494 | 0 | 0 | 0 |
| ARTNYSSSYDY | 0 | 0 | 0 | 0 | 760 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1419 | 0 | 0 | 0 |

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| ARTMSSRAFCGGDCYVNDY | 0 | 1533 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1445 | 0 | 0 | 0 |
| ARTLYDSRWIDP | 0 | 0 | 0 | 0 | 2950 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13723 | 0 | 0 | 0 |
| ARTLTTAPDTSYYFDY | 0 | 0 | 0 | 0 | 321 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9499 | 0 | 0 | 0 |
| ARTLLRSSGTFDL | 0 | 2592 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2796 | 0 | 0 | 0 |
| ARTLGYNGYNIEGAFFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7537 | 0 | 0 | 7332 |
| ARTKEYQLRLEY | 0 | 0 | 0 | 1248 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 413 | 0 | 0 | 0 |
| ARTIAATGTQRHLDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9430246 | 0 | 0 | 1124 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARSYYDFWSGFPHDAFDI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 877 | 0 | 0 | 359 |
| ARSVEGHFDY | 764 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1325 | 0 | 0 | 0 |
| ARSTYYNGYFDF | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1488 | 0 | 0 | 62889 |
| ARSTVRDSDWSSGRWYYLDY | 0 | 0 | 0 | 0 | 1750 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5489 | 0 | 0 | 0 |

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| ARSTGGSTGGFDY | 0 | 0 | 0 | 2744 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4087 | 0 | 0 | 0 |
| ARSSRAALAN | 0 | 0 | 0 | 9597 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7709 | 0 | 0 | 0 |
| ARSPLDMSSWYLDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4783 | 0 | 0 | 9509 |
| ARSNIWNPPLY | 0 | 561 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 791 | 0 | 0 | 0 |
| ARSLNYNRYYYYYYMDV | 0 | 1306 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1858 | 0 | 0 | 0 |
| ARSLGVIVPAAMSYYYYMDV | 0 | 1317 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2366 | 0 | 0 | 0 |
| ARSKNYYASGGNYYFDY | 0 | 0 | 0 | 0 | 1572 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1686 | 0 | 0 | 0 |
| ARSKGFLEWLWDY | 0 | 6523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3923 | 0 | 0 | 0 |
| ARSGYCSSTSCRLGWFDP | 0 | 8499 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 481 | 0 | 0 | 0 |
| ARSGGTNVYPFYYMDV | 0 | 0 | 0 | 1717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2959 | 0 | 0 | 0 |
| ARSFLPGTTYYNGMDV | 0 | 0 | 0 | 0 | 8835 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6935 | 0 | 0 | 0 |

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| ARSAGCSTIGCYSIYFDN | 0 | 0 | 0 | 5197 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1970 | 0 | 0 | 0 |
| ARRVASIFPAREGDSVRPERGAAYFYQSMDL | 0 | 0 | 360 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1824 | 0 | 0 | 0 |
| ARRTSSWYYWFDP | 0 | 0 | 0 | 13271 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 886 | 0 | 0 | 0 |
| ARRSRGWYLDV | 0 | 0 | 0 | 3001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1901 | 0 | 0 | 0 |
| ARRSPYYDRSGYHFFDD | 0 | 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4629 | 0 | 0 | 0 |
| ARRPQSFYFDL | 0 | 0 | 0 | 4232 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8001 | 0 | 0 | 0 |
| ARRPQSFYFDF | 0 | 0 | 0 | 8906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5153 | 0 | 0 | 0 |
| ARRLTYASGWFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1935 | 0 | 0 | 24800 |
| ARRLAAAAAGGFDY | 0 | 0 | 0 | 0 | 5123 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10746 | 0 | 0 | 0 |
| ARRGLFDY | 0 | 0 | 0 | 920 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1264 | 0 | 0 | 0 |
| ARRGGSSYDFGGAFDR | 0 | 3952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 843 | 0 | 0 | 0 |

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| ARRFDY | 0 | 0 | 0 | 0 | 329 | 0 | 0 | 0 | 0 | 0 | 1764 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARRDQQSAYAYSY | 0 | 0 | 0 | 0 | 4032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 645 | 0 | 0 | 0 |
| ARRDGDYERDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 378 | 0 | 0 | 1180 |
| ARQVSHFYYLEV | 0 | 0 | 0 | 832 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2383 | 0 | 0 | 0 |
| ARQTSGSTSPPAFDI | 0 | 0 | 0 | 0 | 5816 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4026 | 0 | 0 | 0 |
| ARQTALHSFDI | 387 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6995 | 0 | 0 | 0 |
| ARQRYCSGCNWFDP | 0 | 0 | 0 | 72121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24186 | 0 | 0 | 0 |
| ARQRTLAGVFDY | 0 | 3013 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20271 | 0 | 0 | 0 |
| ARQRLRSPRAFDI | 0 | 2440 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5248 | 0 | 0 | 0 |
| ARQRALAGIFDY | 0 | 4017 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28178 | 0 | 0 | 0 |

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| ARQQWLADRFDP | 0 | 2505 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6831 | 0 | 0 | 0 |
| ARQFGSGSYIFSNFDY | 0 | 0 | 0 | 841 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3252 | 0 | 0 | 0 |
| ARQENYYYYYMDV | 0 | 4147 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14842 | 0 | 0 | 0 |
| ARQEGRTDGSGSYRPFDS | 0 | 0 | 0 | 1496 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 696 | 0 | 0 | 0 |
| ARPYGSSGYYRN | 0 | 0 | 0 | 903 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13448 | 0 | 0 | 0 |
| ARPVLDHYYGLDV | 0 | 0 | 0 | 354 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4000 | 0 | 0 | 0 |
| ARPTFPTRLGYRFDAFDI | 0 | 8024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1944 | 0 | 0 | 0 |
| ARPRGPSSSYRYMDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2426 | 0 | 0 | 6284 |
| ARPRGGEGGYFYMDV | 0 | 507 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1824 | 0 | 0 | 0 |
| ARPQSTCPKCAFDI | 0 | 3715 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5773 | 0 | 0 | 0 |
| ARPQSSSWYYFDY | 0 | 0 | 0 | 3789 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5386 | 0 | 0 | 0 |

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| ARPQSSSWFYFDY | 0 | 0 | 0 | 34015 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1471 | 0 | 0 | 0 |
| ARPQSSSWFYFDS | 0 | 0 | 0 | 15697 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1591 | 0 | 0 | 0 |
| ARPQDRYYSYYYMDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1041 | 0 | 0 | 3922 |
| ARPPNTAVADPFND | 0 | 0 | 0 | 398 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8423 | 0 | 0 | 0 |
| ARPNGDYDWGAYDI | 0 | 4082 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9258 | 0 | 0 | 0 |
| ARPLAAAGTRRPPTYYYYYGMDV | 0 | 3607 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4190 | 0 | 0 | 0 |
| ARPHTSGWHDAYDI | 0 | 0 | 0 | 584 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11891 | 0 | 0 | 0 |
| ARPGHVNPPD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 335 | 0 | 0 | 451 |
| ARPESSSIDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 404 | 0 | 0 | 23342 |
| ARNPTGETALFDY | 0 | 1414 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1075 | 0 | 0 | 0 |
| ARNEYSGHSGYFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11564 | 0 | 0 | 749 |

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| ARMYYDSGTFEDWFDP | 0 | 0 | 0 | 15653 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6349 | 0 | 0 | 0 |
| ARMGSGSTYGKYSD | 0 | 0 | 0 | 25099 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 59438 | 0 | 0 | 0 |
| ARLVVLKGFDY | 0 | 0 | 0 | 1770 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17707 | 0 | 0 | 0 |
| ARLSWGGYNYDY | 0 | 9245 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3820 | 0 | 0 | 0 |
| ARLSSVGGRVVSRGDPASRPNARQDYFDF | 0 | 0 | 0 | 0 | 4092 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 550 | 0 | 0 | 0 |
| ARLSGYSGIGSFDF | 0 | 0 | 0 | 982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3174 | 0 | 0 | 0 |
| ARLRRAVPTMNYYFDF | 0 | 3520 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8234 | 0 | 0 | 0 |
| ARLRGDHFANWFDP | 0 | 0 | 0 | 0 | 5233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5153 | 0 | 0 | 0 |
| ARLPVSLATFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 929 | 0 | 0 | 2177 |
| ARLPITFGGVIVIGYFDY | 0 | 4406 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 524 | 0 | 0 | 0 |
| ARLNYYMYSSSRFDP | 0 | 5184 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3407 | 0 | 0 | 0 |

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| ARLNYYDNFFDS | 0 | 5119 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 533 | 0 | 0 | 0 |
| ARLMLWSYGMDV | 1163 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 912 | 0 | 0 | 0 |
| ARLKGNYCSSTYCLNWFDP | 819 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4852 | 0 | 0 | 0 |
| ARLHDWNNLDF | 0 | 2862 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4396 | 0 | 0 | 0 |
| ARLGSCTEKSCHMDY | 0 | 0 | 0 | 1797 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9576 | 0 | 0 | 0 |
| ARLAYYGSGNYVFDL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1617 | 0 | 0 | 4138 |
| ARKVAMDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3329 | 0 | 0 | 2741 |
| ARKGYHDYADDAFEI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13491 | 0 | 0 | 32923 |
| ARKGVLTGSRFDP | 0 | 5897 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1075 | 0 | 0 | 0 |
| ARKGNGDYYFDY | 0 | 0 | 0 | 2974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2228 | 0 | 0 | 0 |
| ARKEVGYYNQYMDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2469 | 0 | 0 | 5545 |

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| ARIREQQLDFDY | 0 | 1501 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4198 | 0 | 0 | 0 |
| ARIPLYNYDSSGYYYAFDI | 0 | 842 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARILDDILTGFDY | 0 | 3369 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9266 | 0 | 0 | 0 |
| ARHYYGSSPDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1574 | 0 | 0 | 2608 |
| ARHYYGSGMYYNIRWFDP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 413 | 0 | 0 | 5576 |
| ARHYTSGFYYIDN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6091 | 0 | 0 | 13904 |
| ARHPSRSISDAYCSSCCCYVFDL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1213 | 0 | 0 | 5329 |
| ARHPSMTTVTYDF | 0 | 0 | 0 | 3585 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3054 | 0 | 0 | 0 |
| ARHPRTGGLLSLNWFDP | 0 | 1576 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1006 | 0 | 0 | 0 |
| ARHPPGGSSGYSAFDY | 0 | 0 | 0 | 10420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12149 | 0 | 0 | 0 |
| ARHPPGGSSGYSAFDF | 0 | 0 | 0 | 8224 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8767 | 0 | 0 | 0 |

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| ARHKPFWVLRGVTDY | 0 | 691 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 808 | 0 | 0 | 0 |
| ARHGWFDP | 0 | 10713 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30562 | 0 | 0 | 0 |
| ARHGPYSSSWVQPFDS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3312 | 0 | 0 | 21842 |
| ARHGGHSGSFYFDY | 0 | 0 | 0 | 22974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2770 | 0 | 0 | 0 |
| ARHDLVGAPGDAFDI | 0 | 766 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13147 | 0 | 0 | 0 |
| ARHAVPVTLLVVAPRPQLDP | 0 | 1738 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4370 | 0 | 0 | 0 |
| ARHAGSGSYYYAFHT | 0 | 0 | 0 | 1921 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3286 | 0 | 0 | 0 |
| ARGYCRGGSCYQLDY | 0 | 529 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 619 | 0 | 0 | 0 |
| ARGWFDP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 329 | 0 | 448 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARGWDNNGWYGRFDY | 0 | 0 | 0 | 1478 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10609 | 0 | 0 | 0 |
| ARGVGATVEHGMDV | 0 | 0 | 0 | 442 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18249 | 0 | 0 | 0 |

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| ARGVDYYGSGRYSISNWFDP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6100 | 0 | 0 | 11018 |
| ARGVDY | 0 | 0 | 0 | 1115 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 301 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARGTYYYDSGIDY | 0 | 0 | 0 | 991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14764 | 0 | 0 | 0 |
| ARGTRWQDY | 0 | 0 | 0 | 0 | 346 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12286 | 0 | 0 | 0 |
| ARGTPTWGRGVIIEGAQMDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 628 | 0 | 0 | 318 |
| ARGTLIRGVIVRGPLPYYFDY | 0 | 0 | 0 | 24931 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1643 | 0 | 0 | 0 |
| ARGSTVAQRTDVFDI | 0 | 2581 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9335 | 0 | 0 | 0 |
| ARGSPPGYMDV | 0 | 8154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3837 | 0 | 0 | 0 |
| ARGRNFYSIAVAGTIGYDAFDI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12209 | 0 | 0 | 1078 |
| ARGRLRADY | 0 | 0 | 9544 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6935 | 0 | 0 | 0 |
| ARGRLDSSGYYPSYYYYCYMDV | 0 | 0 | 0 | 7631 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2761 | 0 | 0 | 0 |

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| ARGRGGELSSFDF | 0 | 3888 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2675 | 0 | 0 | 0 |
| ARGPTRYYFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5069 | 0 | 0 | 0 | 0 | 1573 | 0 | 0 |
| ARGPSYGSGSYYPDY | 0 | 12928 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4913 | 0 | 0 | 0 |
| ARGPSGDSHGIDY | 0 | 0 | 0 | 2266 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5721 | 0 | 0 | 0 |
| ARGPNYGDRSDYLNP | 0 | 0 | 0 | 619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2744 | 0 | 0 | 0 |
| ARGPICSGTRCYGWFDP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2323 | 0 | 0 | 4179 |
| ARGPFVPHDFDI | 0 | 2451 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 688 | 0 | 0 | 0 |
| ARGPFGDYTNYFDY | 0 | 0 | 0 | 3780 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5739 | 0 | 0 | 0 |
| ARGPFDY | 310 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 315 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARGPDYGDGRIDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7107 | 0 | 0 | 318 |
| ARGPAPKTTVGWGPNWFDP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5059 | 0 | 0 | 6859 |

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| ARGMYYYGSGTYRAPYPYFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2228 | 0 | 0 | 4929 |
| ARGMRFGESFNRFDS | 0 | 0 | 0 | 3240 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1695 | 0 | 0 | 0 |
| ARGLYSSTWFPYY | 0 | 0 | 0 | 2585 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3966 | 0 | 0 | 0 |
| ARGLVVVPAAKQDYYYMDV | 0 | 6998 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4637 | 0 | 0 | 0 |
| ARGLVTAPGAFDV | 0 | 0 | 0 | 4515 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2237 | 0 | 0 | 0 |
| ARGLTGMNFWSGPNYNWFDP | 0 | 0 | 0 | 0 | 304 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 593 | 0 | 0 | 0 |
| ARGLRYYDSSGYYEHHDAFDI | 0 | 0 | 0 | 1947 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8174 | 0 | 0 | 0 |
| ARGLRFLEWLFGN | 0 | 2181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3854 | 0 | 0 | 0 |
| ARGLPVGSTTPEDYMDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 851 | 0 | 0 | 15301 |
| ARGLPTIAHNWFDA | 0 | 324 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13035 | 0 | 0 | 0 |
| ARGLNSSKWYEAY | 0 | 11102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3217 | 0 | 0 | 0 |

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| ARGKRFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2039 | 0 | 0 | 349 |
| ARGIVGATFDD | 0 | 1274 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18602 | 0 | 0 | 0 |
| ARGITMARGTWSFDY | 0 | 0 | 793 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2899 | 0 | 0 | 0 |
| ARGITGDY | 0 | 0 | 0 | 0 | 10534 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3596 | 0 | 0 | 0 |
| ARGISCWD | 0 | 0 | 0 | 14546 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3751 | 0 | 0 | 0 |
| ARGHYSRGYSFAS | 0 | 0 | 0 | 929 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10643 | 0 | 0 | 0 |
| ARGHYGMDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1509 | 4651 | 0 | 0 | 0 | 0 | 0 |
| ARGHFWGESYNKFDF | 0 | 0 | 0 | 433 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 335 | 0 | 0 | 0 |
| ARGGY | 0 | 0 | 0 | 398 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 513 |
| ARGGVGSFDA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8982 | 0 | 0 | 51993 |
| ARGGSYFDY | 343 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 374 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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| ARGGSNHLFDI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2039 | 0 | 0 | 13421 |
| ARGGPSSKYFDL | 0 | 0 | 0 | 752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 492 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARGGLTIFGVVTPSWFGP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7408 | 0 | 0 | 790 |
| ARGGISYNYGQNFLDS | 0 | 0 | 0 | 11642 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10471 | 0 | 0 | 0 |
| ARGGHWYFDL | 0 | 0 | 0 | 1655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2090 | 0 | 0 | 0 |
| ARGGGRHYFYYFYMDL | 0 | 0 | 0 | 752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 550 | 0 | 0 | 0 |
| ARGGGPPDY | 1362 | 0 | 0 | 0 | 0 | 14151 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARGGFHHGFDL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 430 | 0 | 0 | 1447 |
| ARGGCSGAGCYSGIIYHVDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4104 | 0 | 0 | 14151 |
| ARGFYRYNWDGRGDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1462 | 0 | 0 | 2207 |
| ARGFRPFGSASYFPFDP | 0 | 0 | 0 | 2664 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3028 | 0 | 0 | 0 |
| ARGFNYDLFSEGPGGFDP | 0 | 2160 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4362 | 0 | 0 | 0 |

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| ARGEYSGNAYLADYFDF | 0 | 4870 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 481 | 0 | 0 | 0 |
| ARGDYNWNLPFD | 0 | 1220 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4861 | 0 | 0 | 0 |
| ARGDSTTWAQFDY | 0 | 0 | 0 | 3629 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 774 | 0 | 0 | 0 |
| ARGDSSSEYVLVQTIDY | 0 | 0 | 7050 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5868 | 0 | 0 | 0 |
| ARGDHSSSWYQAFDI | 0 | 1933 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1686 | 0 | 0 | 0 |
| ARGAAHYYYGSGSGAFDI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 877 | 0 | 0 | 15167 |
| ARFRLPLDS | 0 | 0 | 0 | 4727 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12269 | 0 | 0 | 0 |
| AREVLDYGDNSYYDYGMDV | 0 | 2106 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4620 | 0 | 0 | 0 |
| AREVFEAMATISGDYFDS | 0 | 0 | 0 | 1195 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15874 | 0 | 0 | 0 |
| AREVDYGGESWYFDL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18481 | 0 | 0 | 7209 |
| AREVDKVTPTSDAFDI | 0 | 5540 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12579 | 0 | 0 | 0 |

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| ARETSVPPGKAFDI | 0 | 0 | 0 | 619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11607 | 0 | 0 | 0 |
| ARETNSANPFEN | 0 | 0 | 0 | 3355 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14102 | 0 | 0 | 0 |
| ARESSTRFDY | 0 | 3402 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1230 | 0 | 0 | 0 |
| ARERVSSSGYYYYYMDV | 0 | 5043 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15935 | 0 | 0 | 0 |
| ARERTGYCSVRSCLRGWIDP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 800 | 0 | 0 | 4888 |
| ARERLTVTTKVDGMDV | 0 | 4611 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12949 | 0 | 0 | 0 |
| ARERGYRYGVWTGQHDAIDI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2254 | 0 | 0 | 8225 |
| AREREPYSSVWPYVNWFDP | 0 | 0 | 0 | 1938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5825 | 0 | 0 | 0 |
| AREPLNIGATKFYDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1428 | 0 | 0 | 1622 |
| ARENRHCIGKTCLYWYFDF | 0 | 0 | 0 | 0 | 16308 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2185 | 0 | 0 | 0 |
| AREMAYYGSGTLGGWFDP | 0 | 4060 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17569 | 0 | 0 | 0 |

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| ARELVSSYYYYGLDV | 0 | 0 | 1071 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1652 | 0 | 0 | 0 |
| ARELVPLYGMDV | 0 | 2916 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 507 | 0 | 0 | 0 |
| ARELRTAAGRNWFDP | 0 | 35608 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6220 | 0 | 0 | 0 |
| ARELRGCGGDCHDS | 0 | 0 | 0 | 15520 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11211 | 0 | 0 | 0 |
| AREHGFDSWNGYSVPAWDYFDP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5145 | 0 | 0 | 8071 |
| AREGYYYDSSGYERGGYFDY | 0 | 410 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7571 | 0 | 0 | 0 |
| AREGRWFGELQPNSWFDP | 0 | 0 | 0 | 5462 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7597 | 0 | 0 | 0 |
| AREGRGVLGPSEDFDL | 0 | 0 | 1525 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9447 | 0 | 0 | 0 |
| AREGQNVAFCGGDCYSPYDF | 0 | 464 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1944 | 0 | 0 | 0 |
| AREGPSGYKDY | 0 | 3369 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2211 | 0 | 0 | 0 |
| AREGKDYFDIYNYGGFDI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1101 | 0 | 0 | 12004 |

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| AREGGSSGHAAYFDY | 0 | 0 | 1669 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1608 | 0 | 0 | 0 |
| AREGGGYRFDY | 0 | 0 | 0 | 0 | 1318 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1064 | 0 | 0 | 0 | 0 | 0 | 0 |
| AREFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 470 | 0 | 0 | 0 | 0 | 0 | 375 | 0 |
| AREDTAMALFDL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21717 | 0 | 0 | 38016 |
| AREDTAMAIFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15676 | 0 | 0 | 122594 |
| AREASCSNTNCYIAY | 0 | 0 | 0 | 0 | 2451 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 559 | 0 | 0 | 0 |
| AREAMEYDAFDI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 705 | 0 | 0 | 12169 |
| AREALWDLRVGSWLDP | 0 | 0 | 0 | 1186 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 645 | 0 | 0 | 0 |
| ARDYYGDYYFDY | 0 | 0 | 0 | 0 | 0 | 341 | 0 | 0 | 0 | 0 | 573 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARDYIHDSSGYYDRREGAFHI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6702 | 0 | 0 | 8544 |
| ARDYGDYFDY | 0 | 0 | 0 | 8331 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 499 | 0 | 0 | 0 | 0 |

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| ARDWVSSMNRGLVVGLVRFDP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14928 | 0 | 0 | 4138 |
| ARDWDSGYSSSWSHFDY | 0 | 22346 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6057 | 0 | 0 | 0 |
| ARDWAYSHES | 0 | 0 | 0 | 1088 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4861 | 0 | 0 | 0 |
| ARDWAGPVAGTGDN | 0 | 56961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2770 | 0 | 0 | 0 |
| ARDVSGSGSYHLRGGHYYYNMDV | 0 | 0 | 0 | 1496 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 301 | 0 | 0 | 0 |
| ARDVKYSSYYDYFYMDV | 0 | 2214 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3243 | 0 | 0 | 0 |
| ARDTRNYFGSGSYGY | 0 | 0 | 0 | 1248 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8010 | 0 | 0 | 0 |
| ARDTPSRYGDYGYFDY | 0 | 5043 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12923 | 0 | 0 | 0 |
| ARDTGDTFDF | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19032 | 0 | 0 | 22767 |
| ARDSVEDDSAYFDF | 0 | 0 | 0 | 619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2452 | 0 | 0 | 0 |
| ARDSTSGLWFGELEYYFDY | 0 | 0 | 0 | 2859 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4870 | 0 | 0 | 0 |

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| ARDSSAGISNTWHYFDP | 0 | 0 | 0 | 4922 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2340 | 0 | 0 | 0 |
| ARDSPGDY | 0 | 0 | 0 | 199718 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19557 | 0 | 0 | 0 |
| ARDSLLRGFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2194 | 0 | 0 | 11460 |
| ARDSGYCSGGSCPLDY | 0 | 0 | 0 | 1558 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14291 | 0 | 0 | 0 |
| ARDSGVGLDVLDI | 0 | 0 | 0 | 0 | 0 | 0 | 338 | 335 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARDSEVGLDALDV | 0 | 0 | 0 | 0 | 1039 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1600 | 0 | 0 | 0 |
| ARDSDTSSRYSIFDI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2194 | 0 | 0 | 81682 |
| ARDSAVAGLPYYMDV | 0 | 3056 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10901 | 0 | 0 | 0 |
| ARDRYGDYGYGMDV | 0 | 7193 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8457 | 0 | 0 | 0 |
| ARDRVLLSFGDLLSRSYYYYGMDV | 0 | 1717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8965 | 0 | 0 | 0 |
| ARDRRQWLWFDP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7597 | 0 | 0 | 862 |

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| ARDRNNKNSFDP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6100 | 0 | 0 | 31023 |
| ARDRLSGYSDY | 13980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3261 | 0 | 0 | 0 |
| ARDRIAVV | 0 | 0 | 0 | 0 | 7710 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22732 | 0 | 0 | 0 |
| ARDRIAEGGWYDP | 0 | 0 | 0 | 3390 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4973 | 0 | 0 | 0 |
| ARDRGSPYAFDI | 0 | 7700 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1634 | 0 | 0 | 0 |
| ARDRDPFSSAWYRWFAP | 0 | 0 | 0 | 1266 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3088 | 0 | 0 | 0 |
| ARDRDPFSGFGYYGMDV | 0 | 0 | 0 | 1930 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1307 | 0 | 0 | 0 |
| ARDRDGAFDI | 365 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2830 | 0 | 0 | 0 |
| ARDQFRSLPGAGRYYYYYGMDV | 0 | 0 | 0 | 424 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 550 | 0 | 0 | 0 |
| ARDPSG | 0 | 0 | 0 | 389 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 394 | 0 |
| ARDPRYFRY | 0 | 0 | 0 | 0 | 11117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15943 | 0 | 0 | 0 |

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| ARDPLGYNYGPGPFES | 0 | 2592 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2305 | 0 | 0 | 0 |
| ARDPDY | 0 | 0 | 0 | 0 | 312 | 0 | 0 | 0 | 0 | 0 | 558 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARDNYGSHDY | 0 | 5508 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1213 | 0 | 0 | 0 |
| ARDMSSRYYYNPLGV | 0 | 0 | 0 | 4665 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10333 | 0 | 0 | 0 |
| ARDLVATGLGMDV | 0 | 2257 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12002 | 0 | 0 | 0 |
| ARDLSGSLEY | 0 | 0 | 0 | 938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1419 | 0 | 0 | 0 |
| ARDLSGRDDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1385 | 0 | 0 | 2824 |
| ARDLSGAAATMFFHFGMDV | 5871 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2770 | 0 | 0 | 0 |
| ARDLRSGGLTIKALDY | 0 | 0 | 0 | 761 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2262 | 0 | 0 | 0 |
| ARDLNWAFDY | 0 | 0 | 0 | 0 | 0 | 0 | 945 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 534 |
| ARDLLGVKDWFDP | 310 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 688 | 0 | 0 | 0 |

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| ARDLGY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 305 | 0 | 0 | 0 | 587 | 0 |
| ARDLGSYCSSTSCYEEGNWFDP | 0 | 0 | 0 | 0 | 837 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 679 | 0 | 0 | 0 |
| ARDLGDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 381 | 0 | 0 | 0 | 0 | 317 | 0 |
| ARDLEIYSGDRWYDRLDP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 378 | 0 | 0 | 729 |
| ARDLAYSDFDY | 0 | 0 | 0 | 681 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2878 | 0 |
| ARDKSASYYRHYGMDL | 0 | 2581 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1307 | 0 | 0 | 0 |
| ARDKRWVSGMDV | 0 | 0 | 0 | 3656 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3717 | 0 | 0 | 0 |
| ARDKGLTSLDV | 1816 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1282 | 0 | 0 | 0 |
| ARDKDPFSGFGYYGMDV | 0 | 0 | 0 | 20779 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4474 | 0 | 0 | 0 |
| ARDIKFGSGRYFLSPLDN | 0 | 0 | 0 | 2594 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 456 | 0 | 0 | 0 |
| ARDHRVNLQWPQGIGIGFDI | 0 | 356 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 696 | 0 | 0 | 0 |

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| ARDHDDYSDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9146 | 0 | 0 | 5298 |
| ARDGYFDY | 1296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16858 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARDGSGMDV | 0 | 0 | 0 | 0 | 304 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 718 | 0 | 0 | 0 | 0 |
| ARDGSGDYINWFDP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 671 | 0 | 0 | 852 |
| ARDGRDVDYYDNSGASSMFGDVDS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21364 | 0 | 0 | 18043 |
| ARDGMDILTGYFYGMDV | 1052 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6367 | 0 | 0 | 0 |
| ARDGHGEYPIDY | 0 | 0 | 0 | 2532 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8440 | 0 | 0 | 0 |
| ARDGGDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 610 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 605 |
| ARDGGATNYGMDV | 0 | 3186 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 542 | 0 | 0 | 0 |
| ARDFWGSYDY | 0 | 723 | 0 | 0 | 0 | 1287 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARDFSGSQGGDAFDI | 0 | 388 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2383 | 0 | 0 | 0 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ARDFLGSHDY | 0 | 5292 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19626 | 0 | 0 | 0 |
| ARDFGRRGDSRRGVDH | 1196 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 335 | 0 | 0 | 0 |
| ARDEVRCSSTSCHTGIFDY | 0 | 0 | 0 | 2824 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6427 | 0 | 0 | 0 |
| ARDEALHGAWWY | 0 | 1479 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1565 | 0 | 0 | 0 |
| ARDDLLGRGSGSSYYYGMDV | 0 | 810 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3192 | 0 | 0 | 0 |
| ARDAHPSYWYFDL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1514 | 0 | 0 | 9324 |
| ARDAGGWYEDYS | 0 | 0 | 0 | 0 | 2003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7459 | 0 | 0 | 0 |
| ARDAEIQFTGYYGLGV | 0 | 4546 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11460 | 0 | 0 | 0 |
| ARDADTHSQYSQFDH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1445 | 0 | 0 | 93748 |
| ARAYSHSFAGNVDY | 0 | 0 | 0 | 1770 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9817 | 0 | 0 | 0 |
| ARAYGDYIFHYNYYMDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 765 | 0 | 0 | 790 |

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| ARAVRWQLAYYFED | 0 | 0 | 0 | 504 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3071 | 0 | 0 | 0 |
| ARAVGFCSGATCHANPPLDYFMDV | 0 | 0 | 0 | 2195 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 963 | 0 | 0 | 0 |
| ARATVGLGDDFGNDS | 0 | 1285 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1815 | 0 | 0 | 0 |
| ARASPPPSGSYGDDAFDI | 0 | 0 | 0 | 0 | 777 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 826 | 0 | 0 | 0 |
| ARARSWNDFDYYYYMDV | 0 | 0 | 0 | 442 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1918 | 0 | 0 | 0 |
| ARARGSHVLDY | 0 | 0 | 0 | 0 | 3077 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14954 | 0 | 0 | 0 |
| ARARFPFYSSSSDWFDP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1402 | 0 | 0 | 585 |
| ARAPGGQFLPYYHYYIDV | 0 | 723 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10221 | 0 | 0 | 0 |
| ARALYAPFFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3235 | 0 | 0 | 12744 |
| ARALSGYNYVPFDY | 0 | 3380 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 843 | 0 | 0 | 0 |
| ARALNKYYYDNFGY | 0 | 2656 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4465 | 0 | 0 | 0 |

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| ARAKLVFEF | 2381 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5274 | 0 | 0 | 0 |
| ARAIWRREPPIHHSSYMDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 817 | 0 | 0 | 934 |
| ARAIREDYRAEDTDY | 0 | 0 | 0 | 0 | 7220 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8165 | 0 | 0 | 0 |
| ARAHGITMIVDDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 395 | 0 | 0 | 318 |
| ARAGNSGSYYYWFDP | 0 | 0 | 12781 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4069 | 0 | 0 | 0 |
| ARAGGSYCGVECYYENDH | 0 | 0 | 0 | 2381 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8139 | 0 | 0 | 0 |
| ARADGGSGPHNDY | 0 | 0 | 0 | 1434 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5678 | 0 | 0 | 0 |
| ARAAGAAGIDY | 0 | 0 | 0 | 9712 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2873 | 0 | 0 | 0 |
| APYSTTYGWFDP | 0 | 0 | 0 | 0 | 2274 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2331 | 0 | 0 | 0 |
| APWFGESRFDP | 0 | 0 | 0 | 416 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 421 | 0 | 0 | 0 |
| ANSNSHNWFDP | 0 | 1782 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4336 | 0 | 0 | 0 |

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| AMYLPGGSGKGV | 0 | 0 | 0 | 1274 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4749 | 0 | 0 | 0 |
| ALTMTTSSWFDP | 0 | 0 | 0 | 6781 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5773 | 0 | 0 | 0 |
| AKYNSGRDVYYYYYYMDF | 0 | 0 | 0 | 2319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 352 | 0 | 0 | 0 |
| AKVSGRTFDY | 0 | 4125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15754 | 0 | 0 | 0 |
| AKVRISGYSSFDY | 0 | 0 | 0 | 336 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1325 | 0 | 0 | 0 |
| AKVRHDYGVEDAFDI | 0 | 5853 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1583 | 0 | 0 | 0 |
| AKVPRDTDGSYVDDFYFDH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1548 | 0 | 0 | 8246 |
| AKVLYYYDSSGLDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 305 | 0 | 0 | 0 | 0 | 0 | 800 | 0 | 0 | 0 |
| AKVKGYYDSDVFDI | 0 | 4363 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4147 | 0 | 0 | 0 |
| AKVGKMVRGVLHPLFDS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6005 | 0 | 0 | 12836 |
| AKVFRNTAMVGY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1006 | 0 | 0 | 718 |

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| AKTLPDTSGYHKPPIDY | 0 | 0 | 0 | 5108 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6633 | 0 | 0 | 0 |
| AKTGQLDS | 0 | 0 | 2824 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 351 | 0 | 0 |
| AKTGQFDS | 0 | 0 | 1102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1394 | 0 | 0 |
| AKTARLLDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 339 | 0 | 0 | 0 | 0 | 1084 | 0 | 0 | 0 | 0 | 0 |
| AKSVIVQYYYYYGMDV | 0 | 0 | 0 | 699 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6160 | 0 | 0 | 0 |
| AKSVERDSFYYYLYGMDV | 0 | 0 | 0 | 0 | 9029 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2589 | 0 | 0 | 0 |
| AKSPLAYIGSYYSRSYYFDY | 0 | 0 | 0 | 451 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 335 | 0 | 0 | 0 |
| AKSDGYNVVENWFDP | 0 | 0 | 0 | 1372 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2546 | 0 | 0 | 0 |
| AKSDGYNLVENWFDP | 0 | 0 | 0 | 3603 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11159 | 0 | 0 | 0 |
| AKRVAVSGTQHSRAFDI | 0 | 0 | 0 | 19982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9980 | 0 | 0 | 0 |
| AKRILAAGPNFDY | 0 | 0 | 0 | 3886 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3691 | 0 | 0 | 0 |

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| AKRAHDNSTDWFDS | 0 | 1674 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 963 | 0 | 0 | 0 |
| AKPPYGGSYWDAFNI | 0 | 0 | 0 | 2186 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13250 | 0 | 0 | 0 |
| AKPNGAGNTYGPNPFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3605 | 0 | 0 | 1222 |
| AKPIVVGGTSYFYYGMDV | 0 | 0 | 0 | 0 | 3838 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9172 | 0 | 0 | 0 |
| AKPFAHCSTTNSCPSGVYALDI | 0 | 486 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2262 | 0 | 0 | 0 |
| AKPDSGSIAAASYFRY | 0 | 0 | 0 | 858 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2004 | 0 | 0 | 0 |
| AKNGAYCSGDCSFFFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2486 | 0 | 0 | 1109 |
| AKMGRLAAAGDFDY | 0 | 1641 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14988 | 0 | 0 | 0 |
| AKMGQWPLSAFGD | 0 | 1609 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13267 | 0 | 0 | 0 |
| AKMDRLSLRDRVDWFDP | 0 | 0 | 0 | 752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2624 | 0 | 0 | 0 |
| AKKTPGYSNTLGLAFDI | 0 | 0 | 0 | 1894 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12372 | 0 | 0 | 0 |

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| AKHPGIIVSAREPFDM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1746 | 0 | 0 | 2331 |
| AKGVGYGSFDY | 0 | 0 | 0 | 725 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2598 | 0 | 0 | 0 |
| AKGTIYFDY | 0 | 950 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8896 | 0 | 0 | 0 |
| AKGSTLGSGNYGPIDY | 0 | 0 | 0 | 0 | 1783 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1617 | 0 | 0 | 0 |
| AKGSDFDL | 0 | 1069 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 559 | 0 | 0 | 0 |
| AKGRSETPAAAANY | 0 | 0 | 0 | 2319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 499 | 0 | 0 | 0 |
| AKGRRSSGGYLSEYFDY | 0 | 0 | 0 | 371 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2116 | 0 | 0 | 0 |
| AKGNTGYNFGLEDP | 0 | 0 | 2782 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1522 | 0 | 0 | 0 |
| AKGLRYFDY | 1395 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9800 | 0 | 0 | 0 |
| AKGKSYGGYAFRASDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2400 | 0 | 0 | 6839 |
| AKGKQSYSYYFYYMDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8199 | 0 | 0 | 1335 |

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| AKGGWGTVLDY | 775 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2687 | 0 | 0 | 0 | 0 | 0 |
| AKGGTTSFYYYYYYMDV | 0 | 1706 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4895 | 0 | 0 | 0 |
| AKGGNSFDF | 0 | 1944 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2787 | 0 | 0 | 0 |
| AKGGLVRGLHFDS | 0 | 0 | 0 | 5294 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14498 | 0 | 0 | 0 |
| AKGGDYGGNQFNY | 0 | 35274 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 679 | 0 | 0 | 0 |
| AKGGASGSIRNYFDC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1041 | 0 | 0 | 5874 |
| AKFSQYSYDTSGYSRQDSVDI | 0 | 0 | 0 | 460 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2168 | 0 | 0 | 0 |
| AKEVASVPNTGLDV | 0 | 0 | 0 | 1221 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2013 | 0 | 0 | 0 |
| AKESWGSCRGGSCHTFDY | 0 | 1047 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1084 | 0 | 0 | 0 |
| AKESGRDAFDI | 0 | 3358 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10230 | 0 | 0 | 0 |
| AKEHRYSGYDYFDY | 387 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11968 | 0 | 0 | 0 |

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| AKEGYTYGYADY | 0 | 442 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6565 | 0 | 0 | 0 |
| AKEGVFLWVGEQNYYGLDV | 0 | 5270 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2848 | 0 | 0 | 0 |
| AKEGGYDSSGYYWFDY | 0 | 734 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3587 | 0 | 0 | 0 |
| AKEAHYYFED | 0 | 0 | 11657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 456 | 0 | 0 | 0 |
| AKDYPDGALLDAPIPFFDY | 0 | 0 | 0 | 0 | 2612 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3286 | 0 | 0 | 0 |
| AKDYGSGRRDDNYGLDV | 0 | 0 | 2267 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 610 | 0 | 0 | 0 |
| AKDTPGQYSSGWVEYLQH | 2160 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4697 | 0 | 0 | 0 |
| AKDSPFDY | 0 | 0 | 0 | 0 | 338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3218 | 0 | 0 | 0 | 0 |
| AKDSDQVQEAFDI | 0 | 745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3828 | 0 | 0 | 0 |
| AKDRTETTLGDYYYYGMDV | 0 | 0 | 0 | 681 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 533 | 0 | 0 | 0 |
| AKDRLGEQQPSDY | 0 | 1674 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 671 | 0 | 0 | 0 |

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| AKDRHSGSGGLFES | 0 | 702 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 326 | 0 | 0 | 0 |
| AKDRGYYGHGGQYSSGENFFDS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3415 | 0 | 0 | 6726 |
| AKDRGIAAADIYYGMDV | 0 | 0 | 0 | 717 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9258 | 0 | 0 | 0 |
| AKDREGAVADYFDC | 0 | 0 | 0 | 1133 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2435 | 0 | 0 | 0 |
| AKDRDYYGSGSYYDY | 0 | 1814 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1652 | 0 | 0 | 0 |
| AKDRDIQTGDLDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1195 | 0 | 0 | 7085 |
| AKDRDAFNSHFYGMDV | 0 | 0 | 0 | 2868 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1264 | 0 | 0 | 0 |
| AKDRAPYHDSSSSYYGKSYFDY | 0 | 0 | 0 | 681 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 912 | 0 | 0 | 0 |
| AKDPLVLGELSPHFDY | 0 | 0 | 0 | 0 | 321 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1884 | 0 | 0 | 0 |
| AKDNYYDNTGYFEY | 0 | 0 | 0 | 0 | 4497 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7494 | 0 | 0 | 0 |
| AKDMSGYGPVNY | 0 | 0 | 0 | 0 | 3390 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 610 | 0 | 0 | 0 |

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| AKDLYSNYANSGGFDI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 860 | 0 | 0 | 2495 |
| AKDLYGDYVGDY | 0 | 896 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4723 | 0 | 0 | 0 |
| AKDLVRVSYGFEDAFDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 963 | 0 | 0 | 10844 |
| AKDLRIAVAFDALDT | 0 | 0 | 0 | 3444 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13164 | 0 | 0 | 0 |
| AKDLRIAVAFDAFDI | 0 | 0 | 0 | 12660 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1944 | 0 | 0 | 0 |
| AKDLMAVHKYFDY | 0 | 0 | 0 | 0 | 1792 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11280 | 0 | 0 | 0 |
| AKDLGYYGSGTPLHY | 0 | 6296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 318 | 0 | 0 | 0 |
| AKDLGY | 0 | 0 | 0 | 0 | 465 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 500 | 0 |
| AKDLDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 333 | 0 | 312 | 0 | 0 | 0 | 0 |
| AKDKTYRYTVFDY | 0 | 0 | 0 | 0 | 7727 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6375 | 0 | 0 | 0 |
| AKDKGGHSYYNYYMDV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10299 | 0 | 0 | 19357 |

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| AKDITSDY | 0 | 0 | 0 | 0 | 363 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 585 | 0 | 0 | 0 |
| AKDILWFGDPHAFDI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 533 | 0 | 0 | 462 |
| AKDIGYSGYGWGYYFNN | 3146 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17630 | 0 | 0 | 0 |
| AKDIDAVAGALSGGYYGMDV | 0 | 4406 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14248 | 0 | 0 | 0 |
| AKDHSYFYDSSGYYFDY | 2980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5945 | 0 | 0 | 0 |
| AKDHSGDYPSY | 0 | 2419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16227 | 0 | 0 | 0 |
| AKDHDYYDSSGYYDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 748 | 0 | 0 | 441 |
| AKDFQYSGGLNSFDP | 0 | 0 | 0 | 1673 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 671 | 0 | 0 | 0 |
| AKDDCSSTSCIYYYMDV | 0 | 507 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3174 | 0 | 0 | 0 |
| AKDAATDISGFSPLDY | 0 | 0 | 0 | 1159 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2125 | 0 | 0 | 0 |
| AKAHSSGWYYFDY | 0 | 0 | 0 | 0 | 338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 336 | 0 |

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| AKAGHYCSSTSCYPHLGPYYYYGMDV | 0 | 1414 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 955 | 0 | 0 | 0 |
| AKADYYESSGYIY | 0 | 313 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1996 | 0 | 0 | 0 |
| AKADVKGGVVINYFDY | 0 | 6825 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4887 | 0 | 0 | 0 |
| AIRSMVPAGTDYFDY | 0 | 0 | 0 | 1894 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4121 | 0 | 0 | 0 |
| AILYGDPKYYYYYYGMDV | 0 | 0 | 0 | 11934 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12674 | 0 | 0 | 0 |
| AILYGDPKYYYYYYGLDV | 0 | 0 | 0 | 770 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10359 | 0 | 0 | 0 |
| AHSYTTGTHLFLQH | 0 | 0 | 0 | 991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5472 | 0 | 0 | 0 |
| AHSRITMFRGILDYGMDV | 0 | 0 | 0 | 513 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6547 | 0 | 0 | 0 |
| AHSQTFEI | 0 | 10584 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14954 | 0 | 0 | 0 |
| AHSIWGEWLVFNY | 0 | 0 | 0 | 3107 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8337 | 0 | 0 | 0 |
| AHSGQCGRHYCYMDV | 0 | 0 | 0 | 380 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6625 | 0 | 0 | 0 |

(continued)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| AHRVPLRSGWYHDAFDV | 0 | 0 | 0 | 43019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 765 | 0 | 0 | 0 |
| AHRQQRGQWLVPYFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2632 | 0 | 0 | 4826 |
| AHRPQSFYFDY | 0 | 0 | 0 | 867 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3717 | 0 | 0 | 0 |
| AHHQNYYESSGYYFDH | 0 | 0 | 0 | 1593 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4396 | 0 | 0 | 0 |
| AGYRLGAFDI | 0 | 0 | 0 | 0 | 11540 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1092 | 0 | 0 | 0 |
| AGTPYCSGGSCYKEDY | 0 | 0 | 0 | 1443 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2891 | 0 | 0 | 0 |
| AGSESYYYFDY | 0 | 669 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2452 | 0 | 0 | 0 |
| AGITGTVVWPGWFDP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1505 | 0 | 0 | 492 |
| AGHYAFWSAEY | 0 | 23058 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18120 | 0 | 0 | 0 |
| AGHVSGTYYRIEY | 0 | 0 | 0 | 4577 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12785 | 0 | 0 | 0 |
| AGEDGRSYGSLDY | 0 | 3596 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15668 | 0 | 0 | 0 |

**Table 2 CDR3 shared profile of baseline immunoglobulin heavy chain immune repertoire in rheumatoid arthritis patient samples(End)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| AGAVYSSGYYGYYYYMDV | 0 | 0 | 2143 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14059 | 0 | 0 | 0 |
| AGAVDTALVPDN | 0 | 0 | 0 | 2328 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17733 | 0 | 0 | 0 |
| AEDASGSLGRGDN | 0 | 2635 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4870 | 0 | 0 | 0 |
| ACRRVAAAGQEFDP | 0 | 0 | 0 | 301 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1299 | 0 | 0 | 0 |
| AATISAEYGSGSYYGMDV | 2514 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 404 | 0 | 0 | 0 |
| AASFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 485 | 0 | 0 | 0 | 352 | 0 | 0 | 0 | 0 | 0 |
| AADVLTGLHYFDY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3863 | 0 | 0 | 3183 |
| AADIDYFFDY | 0 | 0 | 0 | 2036 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1385 | 0 | 0 | 0 |