

Gene	Functionality	L-PART1+L-PART2		FR1-IMGT (1-26)		CDR1-IMGT (27-38)		FR2-IMGT (39-55)		CDR2-IMGT (56-65)		FR3-IMGT (66-104)		CDR3-IMGT (105-117)												
		A (1-15)		B (16-26)		BC (27-38)		C (39-46)		C' (47-55)		C'' (56-65)		C''' (66-74)		D (75-84)		E (85-96)		F (97-104)		FG (105-117)				
		1	10	15	16	23	26	27	38	39	41	46	47	55	56	65	66	74	75	80	84	85	89	96	97	104	105
TRBV1	F	MALPFLVWGWVLLAAVSTDA	TSLSVEQKPRRWLVPH	GQAEATLR	ILK	DSQ	YWP	MSWYQQDL	RGQLQVVLAS	LRS	TGD	EEVINLP	G	ANYRATRVSE	SELSLHVANVTO	GRTLFCT	SK	[6.6.2]					
TRBV2	F	MDSRFLFCWAILCLLGVRLH	VPVGSQSPRHYITEM	GWDVTLR	CDPM	PGH	....	LD	LYWYRQTL	KGKMEFLMS	IYN	....	KEP	SEKAHPMED	C	FSAEMP	DG	AYLILKMQPAQL	GDLAMFLC	ASSL	....	[5.6.4]			
TRBV3	F	MQSGLLCCVALGLLGVGTW	GTGVQVTPPKYLLTQM	GTKTSLCE	EQK	LNH	....	DN	MYWYKQDS	KKLLKAMFH	YNN	....	KEL	VENETVP	S	RFSPEP	DK	AHLNLHIDSLEP	GDSAVYFC	ASS	....	[5.6.3]			
TRBV4	F	MGRFQLCCVTLCLLGIAVSA	DPGVTQIPKYLVGM	TDKKSLK	CEQH	LGH	....	NA	MYWYKQSA	QKPPPELMFI	HSY	....	MKL	SGNESVP	S	RFWPECP	DS	SQCRLLDLSAPK	QDSAVYLC	ASSR	....	[5.6.4]			
TRBV5-2	F	MGSRLCCVTLCLLGGAGLV	DSEVTQTPKYLIKSR	KEQATLRC	SPSE	SGH	....	RS	VNMYQQAL	QGGPQFLVQ	YYR	....	GQV	SGENMP	D	RFSAKQF	SD	FRSELNLSLEL	TDSAVYLC	ASSQ	....	[5.6.4]			
TRBV5-3	F	MGSRLCCVTLCLLGGAGLV	DSEVTQTPKYLIKSR	KQQATLRC	SPSE	SGH	....	FS	VYWYQQVL	QGGPQFLVQ	YYN	....	QKV	SGEAHL	D	RFSGKQF	SD	SRSELNLSLEL	MDSAMYLC	ASSQ	....	[5.6.4]			
TRBV5-4	P	MGSRLCCVTLCLLGGAGLV	DSEVTQTPKYLIKSR	QQQVTLRC	SPSE	SAH	....	HS	VYWYQQAL	GQQP*FLVQ	YYN	....	REM	IQKGIS	D	RFSGKQF	SD	FHSELNLSLEL	TDSAVYLC	ASSQ	....	[5.6.4]			
TRBV5-5	F	MGSRLCCVTLCLLGGAGLV	DSEVTQTPKYLIKSR	KQQVTLRC	SPSE	SGH	....	RS	VYWYQQAL	QGGPQFLVQ	YFD	....	GKV	YQRGNMS	D	RFSGQQ	....	SGSELNLSLEL	MDSALYLC	ASSQ	....	[5.6.4]			
TRBV5-6	F	MGSRLCCVTLCLLGGAGLV	YSGVTQTPKYLIKSR	KQQGILRC	SPSE	SGH	....	LY	VSWYQQAL	QGGPQFLVQ	YYD	....	GKV	RTKGNMP	D	RFSGQF	SD	SHSQMNLSSLEL	SDSAVYLC	ASSQ	....	[5.6.4]			
TRBV5-8	F	MGSRLCCVTLCLLGGAGLV	DSEVTQTPKYLIKSR	KQQAMLR	SPSE	PGH	....	LS	VYWYQQAL	GQLGQFLIQ	YYN	....	RAE	NEKGNIP	D	RFSGKQF	SD	SSSELNVTLSLEL	TDSAVYLC	ASSQ	....	[5.6.4]			
TRBV5-9	F	MCGCPVCCVALCLLAAGLV	DSGVTQTPKYLIKSR	GQGTTLRC	SPSV	SGH	....	LS	VYWYQQAL	QGGPQFLVQ	YYR	....	QEV	SEKQNL	D	RFSGKQF	GD	FHSELNLSLEL	TDSAVYLC	ASSQ	....	[5.6.4]			
TRBV5-11	P	MGSRLCCVTLCLLGGAGLV	DSGVTQTPKYLIKSR	KQQGTLRC	SPSE	SGH	....	RY	VSWYQQAL	GQSPQFLVQ	YFN	....	REV	NEKGNMP	D	*RFSGQF	SD	SCSQMNLSSLEL	TDSAVYLC	ASSQ	....	[5.6.4]			
TRBV5-12	F	MGSRLCCVTLCLLGGAGLV	ESEVTQTPKYLIKSR	KEKVTLRC	SPK	SGH	....	RS	VYWYQQAL	QGGPQFLVQ	YYS	....	QQV	SGEAQL	D	RFSGKQF	SD	FHSELNLSLEL	TDSAVYLC	ASSQ	....	[5.6.4]			
TRBV5-14	F	MGCSPICCVALCLLAAGLV	DSGVTQTPKYLIKSR	GQGTTLRC	SPSV	SGH	....	LS	VYWYQQAL	QGGPQFLVQ	YYS	....	QNV	YGEAQL	D	RFSGQF	SD	SSSELNLSLEL	TDSAVYLC	ASSQ	....	[5.6.4]			
TRBV5-15	P	MGSRLCCVTLCLLGGAGLV	NSGLTSPKYLIKSR	KEQLTLRC	SPSE	SGH	....	RS	VYWYQQAL	GQSPRVLVQ	YYD	....	GKV	YQKGNIS	D	VSGKQF	DD	ARFELSLTLEL	TDSAMYLC	ARSO	....	[5.6.4]			
TRBV5-16	F	MGSRLCCVTLCLLGGAGLV	DSGVTQTPKYLIKSR	KQATLRC	SPSE	SGH	....	RY	VSWYQQAL	QGGPQFLVQ	YYD	....	GKV	HTKGNMP	D	RFSGQF	SD	SRSQMNLSSLEL	TDSAVYLC	ASRQ	....	[5.6.4]			
TRBV5-17	F	MASRFLCCVSLFLLGAGLV	ESEVTQTPKYLIKSR	KEQVTLRC	SPK	SGH	....	RS	VYWYQQAL	QGGPQFLVQ	YYD	....	GEI	YQKENIS	D	RFSGKQF	SD	ARSELNLSLEL	TDSAVYLC	ASRQ	....	[5.6.4]			
TRBV5-18	F	MCGCPICCVALLAAGLV	DSGVTQTPKYLIKSR	GQGTTLRC	SPSV	SGH	....	LS	VYWYQQAL	QGGPQFLVQ	YYN	....	QDV	RGETNLP	D	RFSGQF	SD	SSSELNLSLEL	RDSAVYLC	ASSQ	....	[5.6.4]			
TRBV5-19	F	MGSRLCCVTLCLLGGAGLV	DSGVTQTPKYLIKSR	KQQLTLRC	SPSE	SGH	....	RY	VSWYQQAL	QGGPQFLVQ	YYN	....	REV	NEKGNIP	D	RFSNQF	SD	SRSELNLSLEL	TDSAVYLC	ASSK	....	[5.6.4]			
TRBV5-21	F	MCGCPVCCVALCLLAAGLV	DSGVTQTPKYLIKSR	GQGTTLRC	SPSV	SGH	....	LY	VYWYQQAL	QGGPQFLVQ	YYS	....	QDV	YGEAQL	D	RFSGKQF	SD	SSSELNLSLEL	TDSAVYLC	ASSQ	....	[5.6.4]			
TRBV5-22	F	MGSRLCCVTLCLLGGAGLV	NSGLTSPKYLIKSR	KEHLTLRC	SSD	SGH	....	RS	VYWYQQAL	GQSPRFLVQ	YYD	....	GKV	YQKGNIS	D	VSGKQF	DD	ARFELSLTLEL	TDSAMYLC	ASSQ	....	[5.6.4]			
TRBV5-24	F	MCGCPVCCVALCLLAAGLV	DSGVTQTPKYLIKSR	GQGTTLRC	SPSV	SGH	....	LS	VYWYQQAL	QGGPQFLVQ	YYS	....	QDV	RFSGQF	SD	RFSGKQF	SD	SSSELNLSLEL	MDSAVYLC	ASSQ	....	[5.6.4]			
TRBV5-27	F	MCGCPICCVALLAAGLV	DSGVTQTPKYLIKSR	GQGTTLRC	SPSV	SGH	....	LS	VYWYKLV	QGGPQFLVQ	YYS	....	QDV	WGETNLP	D	RFSGQF	SD	SSSELNLSLEL	MDSAVYLC	ASSQ	....	[5.6.4]			
TRBV5-28	P	MGSRLCCVTLCLLGGAGLV	NSGLTAPKHLIKSR	KE*LTVRC	SPSE	SGY	....	RS	VY*YQQAL	AQGPQFLVQ	YYD	....	GEI	YQKGNIS	N	RVSGKLF	SD	ACSELNLSLEL	THSAVYLC	ASSQ	....	[5.6.4]			
TRBV5-29	F	MGSRLCCVTLCLLGGAGLV	DSGVTQTPKYLIKSR	KQQVTLRC	SPSE	SGH	....	RY	VSWYQQAL	GKSPFLVQ	YYD	....	GKV	RTKGNIP	D	RFSGQF	SD	SRSQMNLSSLEL	TDSAMYLC	ARSO	....	[5.6.4]			
TRBV5-30	F	MGSRLPWVMLYLLGAGPL	EAEVTPRHLIKTK	GQTATLRC	SPM	SGH	....	SS	VSWYQQAR	SQGPQFLFE	FYE	....	TLQ	RDKGNF	S	RFSAKQF	RD	FSEELNVNLEL	TDSALYLC	ASSL	....	[5.6.4]			
TRBV6-1	F	MSPCLLGCVVFLCQAGAV	HAGVTQDPFRFQVVRT	QQRVTLRC	CTQD	LGH	....	DP	MYWYRQDP	GHLRLIHY	SDG	....	PPA	TEKGDVP	D	GYNVSRP	ST	EDFPLLESASR	SQTSVYFC	ASSY	....	[5.6.4]			
TRBV6-2	P	TSPCLLGCVVFLCQAGAV	HAGVTQDPFRFQVVRT	GQSATLRC	CTQD	LNY	....	NY	MYWY*QDP	GHLRLIHY	SAG	....	PPT	TEKGDVP	E	GYSVRS	NK	ENFPLLESANP	SQTSVYFC	ASSY	....	[5.6.4]			
TRBV6-3	P	MSPCLLGCVVFLCQAGAV	HAGVTQDPFRFQVVRT	GQRATLRC	CTQD	LGH	....	DR	MY*YQDDL	AHLRLIHY	SAG	....	MHT	SKPGGV	D	GYNASRS	NT	ENFSLTVESANP	SQTSAYFC	ASSY	....	[5.6.4]			
TRBV6-4	P	MSPCLLGCVVFLCQAGAV	HAGVTQDPFRFQVVRT	QRETLRC	CTQD	LNH	....	DS	MYWC*QDL	GHLRLMRY	SAG	....	PPT	TEKGDVP	E	GYSIS	SR	ENFPLLEFANP	SQTSVYFC	ASSY	....	[5.6.4]			
TRBV6-5	F	MSPCLLGCVVFLCQAGAV	HAGVTQDPFRFQVVRT	GESATLRC	CTQD	LSF	....	SY	MYWYRQDP	GHLRLIHC	SVI	....	PPA	TEKGA	V	E	GYSVSRP	ST	ENFPLLESANA	SQTSVYFC	SCGY	....	[5.6.4]		
TRBV6-6	F	MSPCLLGCVVFLCQAGAV	HAGVTQDPFRFQVVRT	GQNVTLRC	CTQD	LGH	....	DP	MYWYRQDP	GPGLRLIHY	SAG	....	PPT	MQGDVP	D	GYSVRS	SK	ENFPLLESANL	SQTSVYFC	ASSY	....	[5.6.4]			
TRBV6-11	F	MSPCLLGCVVFLCQAGAV	HAGVTQDPFRFQVVRT	QQRVTLRC	CTQD	LGH	....	DP	MYWYRQDL	GHLRLIHY	SAA	....	APN	TEKGDVP	K	GYSISR	ST	EDFPLLESANR	SQTSVYFC	ASSY	....	[5.6.4]			
TRBV6-13	P	MSPCLLGCVVFLCQAGAV	HAGVTQAPRFQVVRT	QQRVTLRC	CTQD	LGH	....	DP	MYWY*QDL	GHLRLIHY	SAG	....	PPS	TEKGDVP	D	GYSVRS	SK	ENFPLLESASR	SQTSVYFC	ASSY	....	[5.6.4]			
TRBV6-16	F	MSPCLLGCVVFLCQAGAV	RAGVTQDPFRFQVVRT	GQNVTLRC	CTQD	LGH	....	NS	MYWYRQDP	GHLRLIHY	SRG	....	PPS	TERGDVP	D	GYSVRS	SK	ENFPLLESANP	SQTSVYFC	ASSY	....	[5.6.4]			
TRBV6-17	ORF	MSPCLLGCVVFLCQAGAV	HAGVTQAPRFQVVRT	GQNTLRC	CTQD	LGH	....	DP	MYWYRQDL	GHLRLIHY	SAG	....	PPS	TEKGDVP	D	GYSVRS	SK	ENFPLLESANP	SQTSVYFC	ASSY	....	[5.6.4]			
TRBV6-18	F	MSPCLLGCVVFLCQAGAV	HSGVTQVPRFQVVRT	GQRVTLRC	CTQN	LDH	....	NS	MYWYRQDP	GHLRLIHY	SRG	....	PPT	TEKGDVP	D	GYSVRS	SK	ENFPLLESANP	SQTSVYFC	ASSY	....	[5.6.4]			
TRBV6-19	F	MSPCLLGCVVFLCQAGAV	HAGVTQDPFRFQVVRT	GESATLRC	CTQD	LSF	....	SY	MYWYRQDP	GHLRLIHY	SVI	....	PPA	TEKGA	V	E	GYSVSRP	ST	ENFPLLESANA	SQTSVYFC	SCGY	....	[5.6.4]		
TRBV6-20	ORF	MSPCLLGCVVFLCQAGAV	HAGVTQDPFRFQVVRT	GQSTLRC	CTQD	LQD	....	NS	MYC	QDL	GLGLRLIHY	SAA	....	YPT	TVKGDVP	E	GYSVSRP	ST	EDFPLLESANR	SQTSVYFC	ASSY	....	[5.6.4]		
TRBV6-21	ORF	MSPCLLGCVVFLCQAGAV	HAGVTQDPFRFQVVRT	GQKATVRC	CTQD	LGH	DR	MYWYRQDL	GHR	..	LIQY	SVG	AST	SEPGDIP	E	GYSF	SR	NT	DYFSLLESASS	SRHVCTSV	PAVT	[5.6.4]	
TRBV6-22	P	MSPCLLGCVVFLCQAGAV	HAGVTQAPRFQVVRT	QQRVTLRC	CTQD	LGH	....	NS	MYWY*QDL	GHLRLIHY	SAG	....	PPS	TEKRDVP	D	GYSVRS	SK	GNFPLLESASR	SQTSVYFC	ASSY	....	[5.6.4]			
TRBV6-23	ORF	MSLCLLGCVVFLCQAAAV	HAGVTQDPFRFQVVRT	GQSMTLRC	CTQD	LHD	....	NS	MYWYRQDP	GHLRLIHY	SRG	....	PPS	TERGDVP	D	GYSVRS	SK	ENFPLLESANP	SQTSVYFC	ASSY	....	[5.6.4]			
TRBV6-24	P	MSLCLLGCVVFLCQAGLV	HAGVTQDPFRFQVVRT	GQSTLRC	CTQD	LGH	....	NS	MYWYRQDP	GLGLRLIHY	*AA	....	YPS	TEKGDVP	E	GYNVSRP	ST	EDFPLLESASR	SQTSVYFC	ASSY	....	[5.6.4]			
TRBV6-25	P	MSPCLLGCVVFLCQAGPI	HAGVTQDPFRFQVVRT	QQRATLRC	CTQD	LGH	....	DR	MY*YQDDL	GPGLRLIHY	SAG	....	PPT	TEKGDVP	D	GYSVRS	SK	ENFPLLESASR	SQTSVYFC	ASSY	....	[5.6.4]			
TRBV6-26	F	MSPCLLGCVVFLCQAGAV	HAGVTQAPRFQVVRT	GQNTLRC	CTQD	LGH	....	DC	MCWDQDL	GHLRLIHY	SAG	....	PPT	TEKGDVP	D	GYSVRS	SK	ENFPLLESASH	SQTSVYFC	ASSY	....	[5.6.4]			
TRBV6-27	F	MSPCLLGCVVFLCQAAAV	HAGVTQDPFRFQVVRT	GQNTLRC	CTQD	LGH	....	DR	MYWYRQDL	GHLRLIHY	SAA	....	YPS	TEKGDVP	E	GYNVSRP	ST	EDFPLLESASR	SQTSVYFC	ASS*	....	[5.6.3]			
TRBV6-28	F	MSPCLLGCVVFLCQAGAV	HAGVTQDPFRFQVVRT	GQNTLRC	CTQD	LGH	....	DG	MYWY	QDL	GHLRLIHY	SAG	....	PPS	TEKGDVP	D	GYSVRS	SK	ENFPLLESASR	SQTSVYFC	ASSY	....	[5.6.4]		
TRBV6-29	F	MSLCLLGCVVFLCQAGAV	HAGVTQDPFRFQVVRT	GQRATLRC	CTQD	LNH	....	DS	MYWYRQDP	GHLRLIHY	SSF	....	TDA	TYKGDVP	D	GYNVRS	ST	ENFPLLESANP	SQTSVYFC	ASST	....	[5.6.4]			
TRBV7-1	F	MGSRLCCVTLCLLGVGHTG	AGVVSQSPRHRVAGR	GQNVTLRC	CDPI	SGH	....	IS	LYWYRQTL	GQGPPEFLTY	FQN	....	EQE	LDKSGMPKN	R	RFSAKRP	QS	TYSYLNIQPAEP	GDSAVYLC	ASSP	....	[5.6.4]			
TRBV7-2	F	MGSRLCCVTLCLLGVGHTG	AGVVSQSPRHRVAGR	GQNVTLRC	CDPI	SGH	....	IS	LYWYRQTL	GQGPPEFLTY	FQN	....	EQE	LDKSGMPKN	R	RFSAKRP	QS	TYSYLNIQPAEP	GDSAVYLC	ASSP	....	[5.6.4]			