**Table S6** Specimen information used for phenomic, transcriptomic and metabolomic analyses

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Specimen ID** | **Species** | **Location/Treatment** | **Sex** | **Muscle histochemistry** | **Muscle electron microscope** | **Transcriptomics** | **Metabolomics** |
| Pamo\_L1 | *Passer montanus* | Lowland | Male | √ |  | √ | √ |
| Pamo\_L2 | *Passer montanus* | Lowland | Female | √ |  | √ | √ |
| Pamo\_L3 | *Passer montanus* | Lowland | Male | √ | √ | √ | √ |
| Pamo\_L4 | *Passer montanus* | Lowland | Male | √ | √ | √ | √ |
| Pamo\_L5 | *Passer montanus* | Lowland | Male | √ | √ | √ | √ |
| Pamo\_L6 | *Passer montanus* | Lowland | Male | √ | √ | √ | √ |
| Pamo\_L7 | *Passer montanus* | Lowland | Female | √ | √ | √ | √ |
| Pamo\_L8 | *Passer montanus* | Lowland | Female | √ | √ | √ | √ |
| Pamo\_L9 | *Passer montanus* | Lowland | Female |  |  |  | √ |
| Pamo\_L10 | *Passer montanus* | Lowland | Male |  |  |  | √ |
| Pamo\_H1 | *Passer montanus* | Highland | Male | √ |  | √ | √ |
| Pamo\_H2 | *Passer montanus* | Highland | Male | √ | √ | √ | √ |
| Pamo\_H3 | *Passer montanus* | Highland | Male | √ | √ | √ | √ |
| Pamo\_H4 | *Passer montanus* | Highland | Female | √ | √ | √ | √ |
| Pamo\_H5 | *Passer montanus* | Highland | Female | √ | √ | √ | √ |
| Pamo\_H6 | *Passer montanus* | Highland | Male | √ | √ | √ | √ |
| Pamo\_H7 | *Passer montanus* | Highland | Female | √ |  | √ | √ |
| Pamo\_H8 | *Passer montanus* | Highland | Female | √ | √ | √ | √ |
| Pamo\_H11 | *Passer montanus* | Highland | Male | √ |  | √ | √ |
| Pamo\_H12 | *Passer montanus* | Highland | Male | √ |  | √ | √ |
| Pyru\_1 | *Montifringilla ruficollis* | Highland | Female |  |  | √ |  |
| Pyru\_2 | *Montifringilla ruficollis* | Highland | Male |  |  | √ |  |
| Pyru\_3 | *Montifringilla ruficollis* | Highland | Female | √ |  | √ | √ |
| Pyru\_4 | *Montifringilla ruficollis* | Highland | Female | √ | √ | √ | √ |
| Pyru\_5 | *Montifringilla ruficollis* | Highland | Male | √ | √ | √ | √ |
| Pyru\_6 | *Montifringilla ruficollis* | Highland | Female | √ | √ | √ | √ |
| Pyru\_7 | *Montifringilla ruficollis* | Highland | Female | √ |  | √ | √ |
| Pyru\_8 | *Montifringilla ruficollis* | Highland | Male | √ | √ | √ | √ |
| Pyru\_9 | *Montifringilla ruficollis* | Highland | Female | √ | √ | √ | √ |
| Pyru\_10 | *Montifringilla ruficollis* | Highland | Male | √ | √ | √ | √ |
| Pyru\_11 | *Montifringilla ruficollis* | Highland | Male | √ |  |  | √ |
| Pyru\_12 | *Montifringilla ruficollis* | Highland | Female | √ |  |  | √ |
| Onta\_1 | *Montifringilla taczanowskii* | Highland | Female | √ | √ | √ | √ |
| Onta\_2 | *Montifringilla taczanowskii* | Highland | Male | √ | √ | √ | √ |
| Onta\_3 | *Montifringilla taczanowskii* | Highland | Female | √ |  | √ | √ |
| Onta\_4 | *Montifringilla taczanowskii* | Highland | Female | √ | √ | √ | √ |
| Onta\_5 | *Montifringilla taczanowskii* | Highland | Female | √ | √ | √ | √ |
| Onta\_6 | *Montifringilla taczanowskii* | Highland | Female | √ |  | √ | √ |
| Onta\_7 | *Montifringilla taczanowskii* | Highland | Male | √ | √ | √ | √ |
| Onta\_8 | *Montifringilla taczanowskii* | Highland | Female | √ | √ | √ | √ |
| Onta\_9 | *Montifringilla taczanowskii* | Highland | Female |  |  | √ |  |
| Onta\_10 | *Montifringilla taczanowskii* | Highland | Female |  |  | √ |  |
| Onta\_11 | *Montifringilla taczanowskii* | Highland | Female | √ |  |  | √ |
| Onta\_12 | *Montifringilla taczanowskii* | Highland | Male | √ |  |  | √ |