Table S2. Websites for downloading the protein datasets of 18 fish species.

|  |  |  |
| --- | --- | --- |
| Species | Common name | Websites |
| *Astyanax mexicanus* | Mexican tetra | ftp://ftp.ensembl.org/pub/release-91/fasta/astyanax\_mexicanus/pep/ |
| *Boleophthalmus pectinirostris* | BP, Blue-spotted mudskipper | ftp://ftp.ncbi.nlm.nih.gov/genomes/all/GCF/000/788/275/GCF\_000788275.1\_BP.fa/ |
| *Ctenopharyngodon idella* | Grass carp | http://www.ncgr.ac.cn/grasscarp/ |
| *Danio rerio* | Zebrafish | ftp://ftp.ensembl.org/pub/release-91/fasta/danio\_rerio/pep/ |
| *Gadus morhua* | Atlantic cod | ftp://ftp.ensembl.org/pub/release-91/fasta/gadus\_morhua/pep/ |
| *Gasterosteus aculeatus* | Three-spined stickleback | ftp://ftp.ensembl.org/pub/release-91/fasta/gasterosteus\_aculeatus/pep/ |
| *Latimeria chalumnae* | Coelacanth | ftp://ftp.ncbi.nlm.nih.gov/genomes/all/GCF/000/225/785/GCF\_000225785.1\_LatCha1/ |
| *Lepisosteus oculatus* | Spotted gar | ftp://ftp.ensembl.org/pub/release-91/fasta/lepisosteus\_oculatus/pep/ |
| *Oreochromis niloticus* | Nile tilapia | ftp://ftp.ensembl.org/pub/release-91/fasta/oreochromis\_niloticus/pep/ |
| *Oryzias latipes* | Medaka | ftp://ftp.ensembl.org/pub/release-91/fasta/oryzias\_latipes/pep/ |
| *Periophthalmus magnuspinnatus* | PM, Giant-fin mudskipper | ftp://ftp.ncbi.nlm.nih.gov/genomes/all/GCA/000/787/105/GCA\_000787105.1\_PM.fa/ |
| *Salmo salar* | Atlantic salmon | ftp://ftp.ncbi.nlm.nih.gov/genomes/all/GCF/000/233/375/GCF\_000233375.1\_ICSASG\_v2 |
| *Sinocyclocheilus anshuiensis* | Sa, Golden-line barbel | ftp://ftp.ncbi.nlm.nih.gov/genomes/all/GCF/001/515/605/GCF\_001515605.1\_SAMN03320099.WGS\_v1.1 |
| *Sinocyclocheilus grahami* | Sg, Golden-line barbel | ftp://ftp.ncbi.nlm.nih.gov/genomes/all/GCF/001/515/645/GCF\_001515645.1\_SAMN03320097.WGS\_v1.1 |
| *Sinocyclocheilus rhinocerous* | Sr, Golden-line barbel | ftp://ftp.ncbi.nlm.nih.gov/genomes/all/GCF/001/515/625/GCF\_001515625.1\_SAMN03320098\_v1.1 |
| *Takifugu rubripes* | Japanese pufferfish | ftp://ftp.ensembl.org/pub/release-91/fasta/takifugu\_rubripes/pep/ |
| *Tetraodon nigroviridis* | Green spotted puffer | ftp://ftp.ensembl.org/pub/release-91/fasta/tetraodon\_nigroviridis/pep/ |
| *Xiphophorus maculatus* | Southern platyfish, moonfish | ftp://ftp.ensembl.org/pub/release-91/fasta/xiphophorus\_maculatus/pep/ |