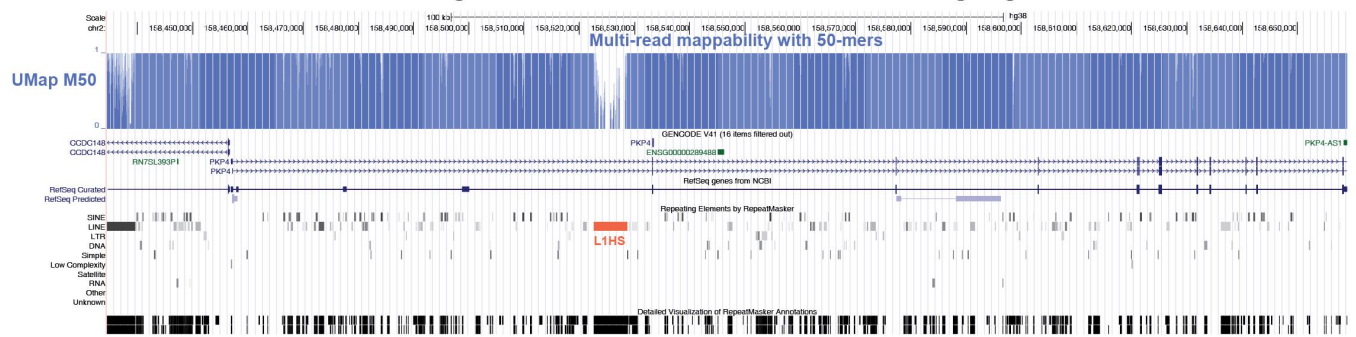
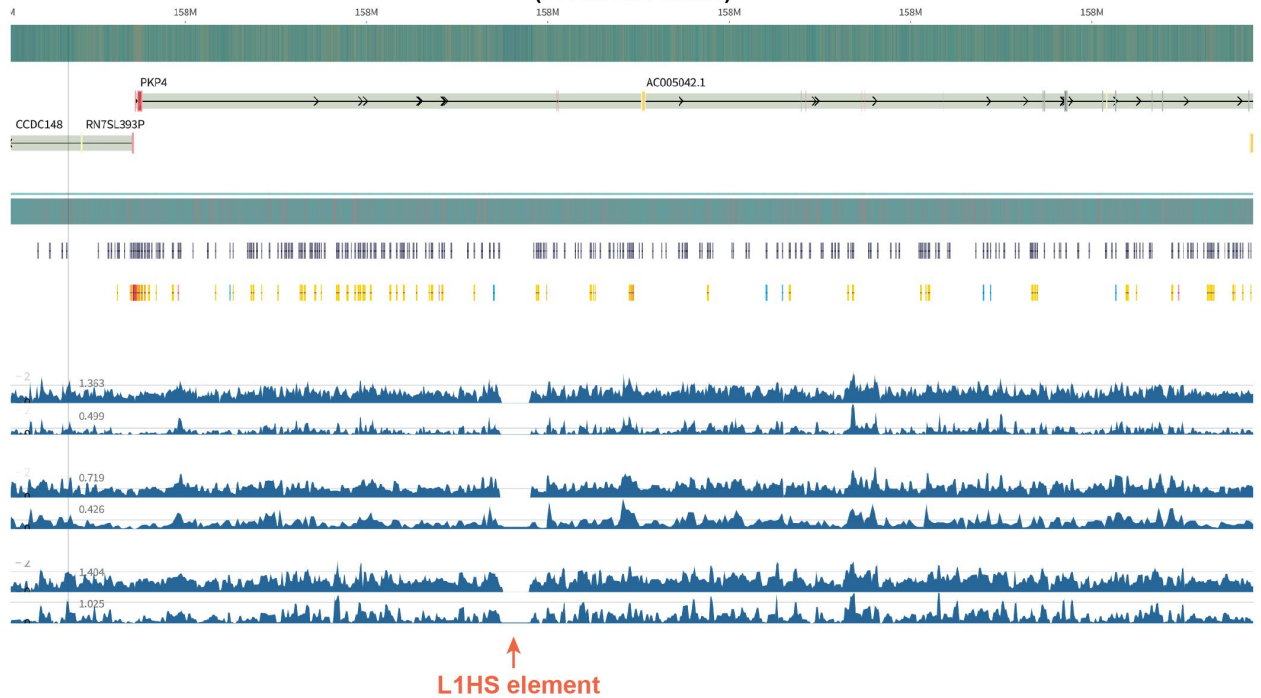
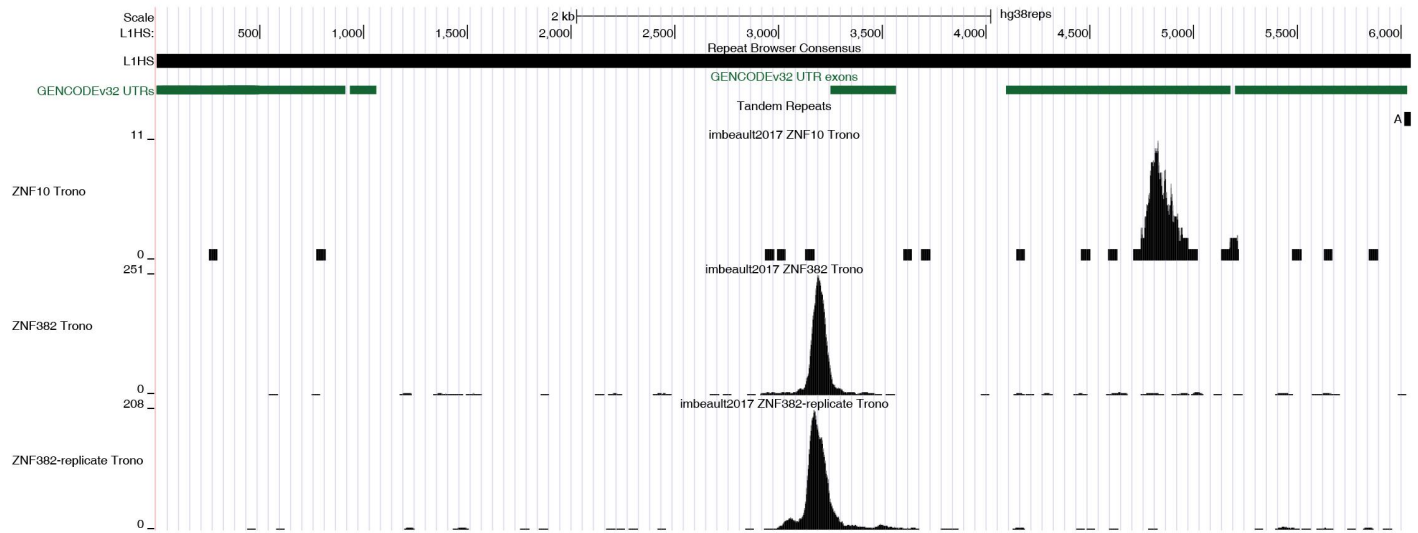


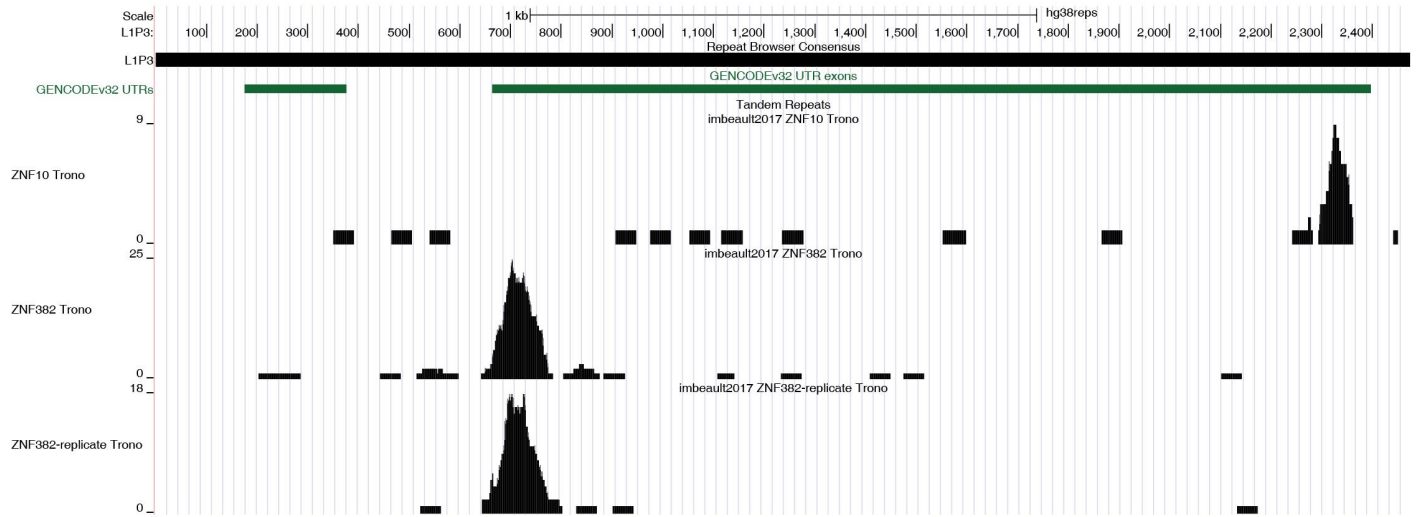
A**UCSC genome browser tracks of PKP4 locus of hg38 genome****B****ENCODE ZNF382 ChIP-seq tracks of PKP4 locus of hg38 genome (ENCSR014HQD)****Figure S1**

- A) UCSC genome browser tracks of PKP4 locus of human genome;
 B) ZNF382 ChIP-seq tracks of PKP4 locus produced and analyzed by ENCODE pipeline;

UCSC repeat browser tracks for ZNF10 and ZNF382 in L1HS region



UCSC repeat browser tracks for ZNF10 and ZNF382 in L1P3 region



UCSC repeat browser tracks for ZNF10 and ZNF382 in L1M4 region

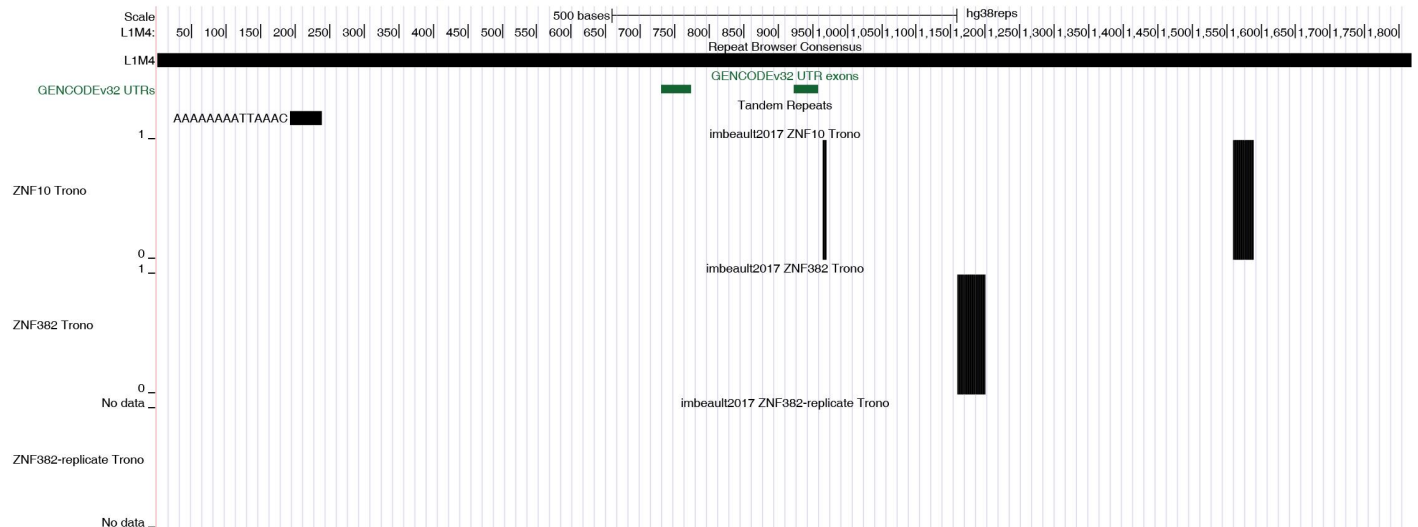


Fig. S2 UCSC repeat browser tracks for ZNF10 and ZNF382 in different LINE-1 repeats (L1HS, L1P3 and L1M4)

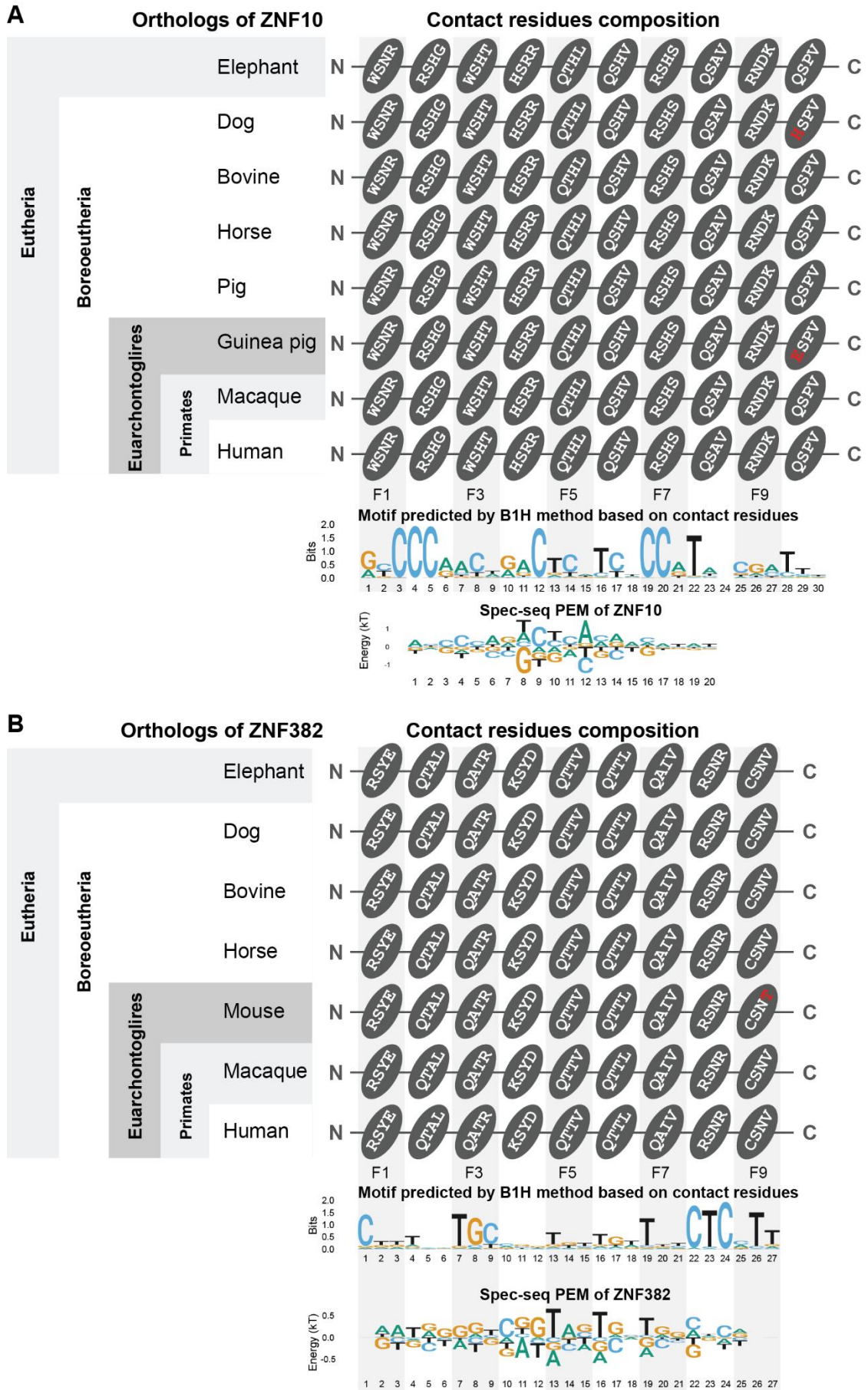


Figure S3 Contact residues composition and predicted motifs of ZNF10 and ZNF382 respectively. (Protein sequences source: NCBI gene database)

ZNF248 ChIP-exo signals mapped along repeat coordinates

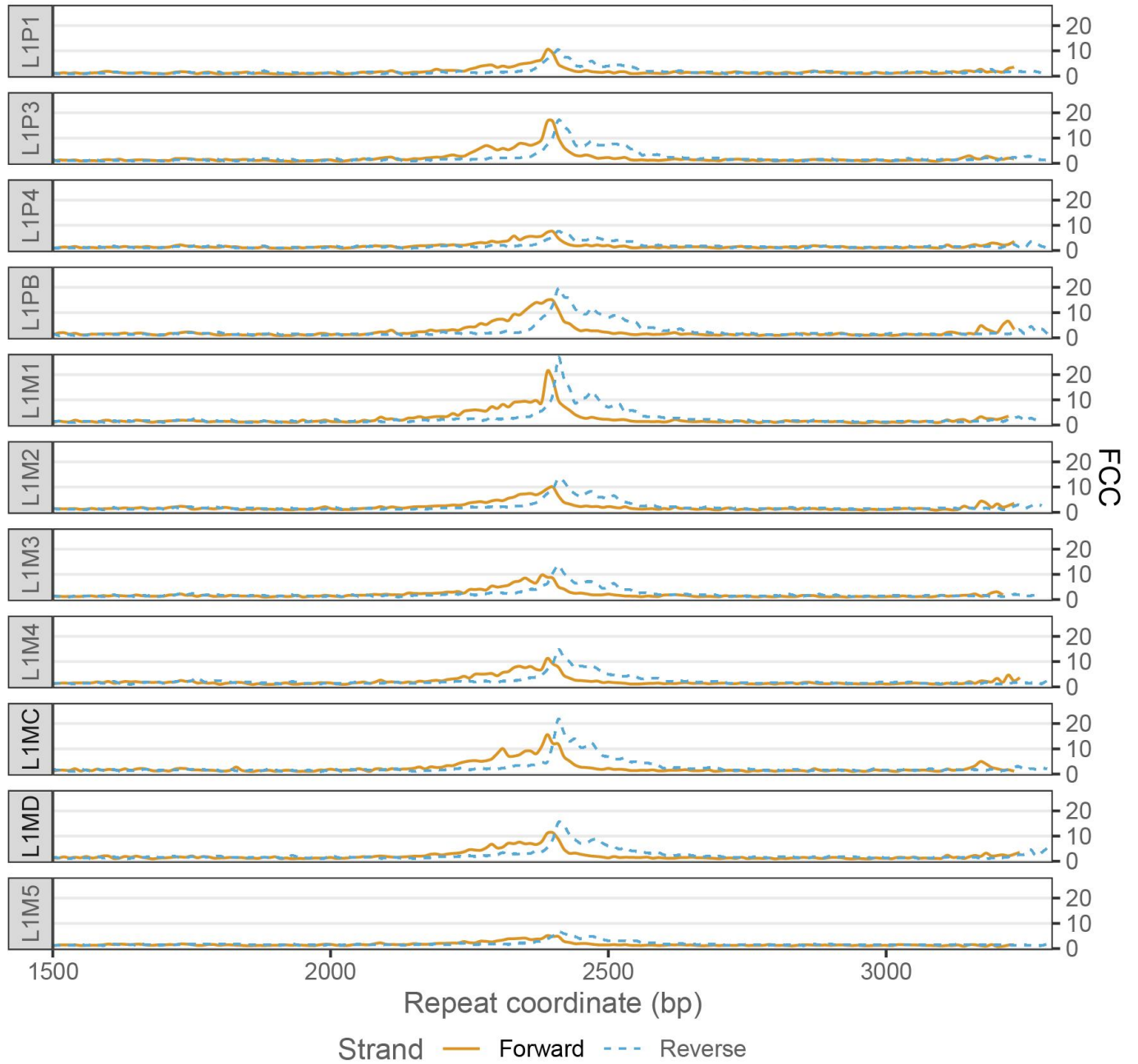


Figure S4 ZNF248 ChIP-exo signals mapped onto LINE1-ORF2 repeat tracks

ZNF84 CHIP-exo signals mapped along repeat coordinates

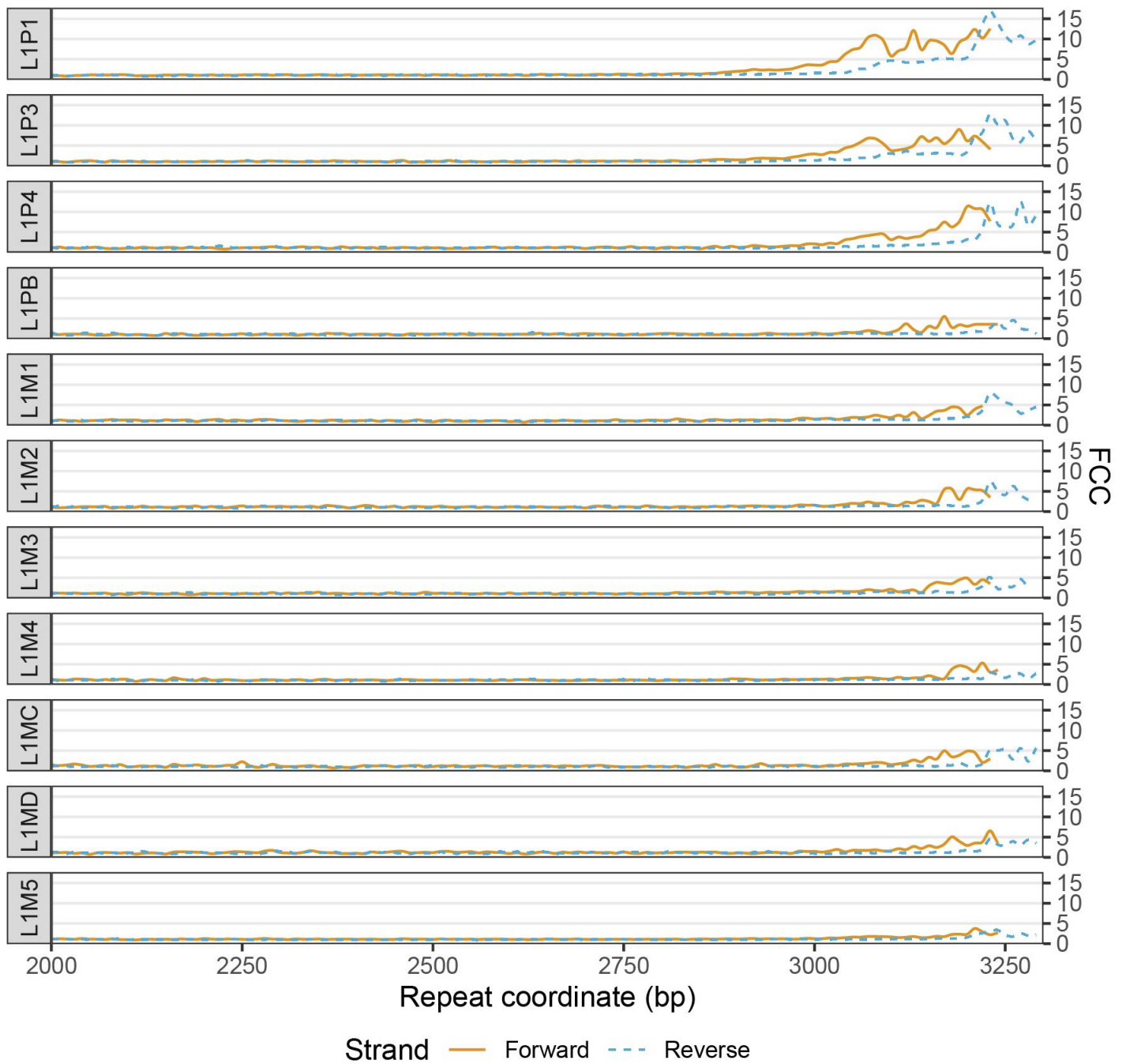


Figure S5 ZNF84 CHIP-exo signals mapped onto LINE1-ORF2 repeat tracks

ZNF490 and ZNF250 ChIP-seq signals mapped along repeat coordinates

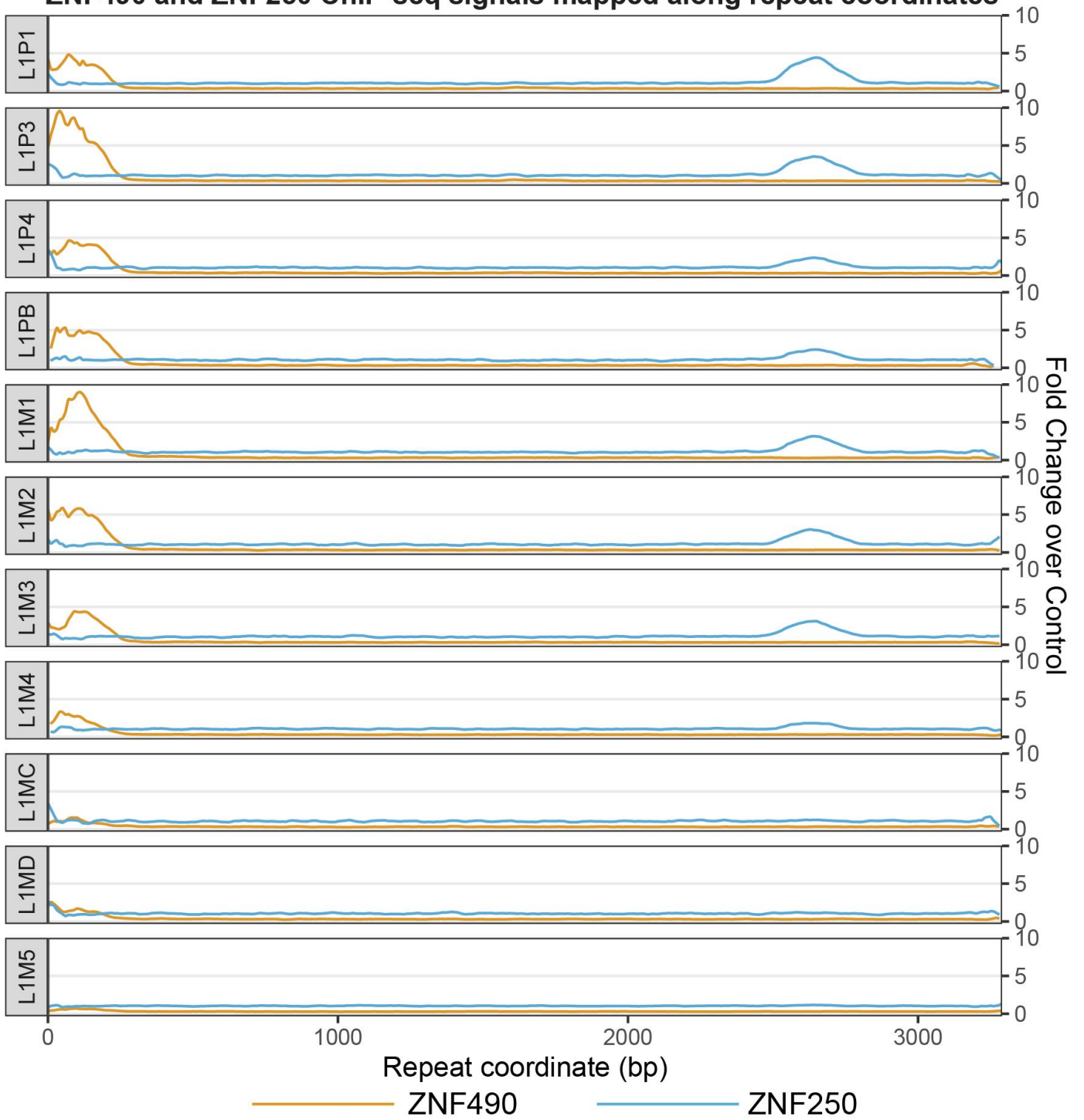


Figure S6 ZNF490 and ZNF250 ChIP-seq signals mapped onto LINE1-ORF2 repeat tracks

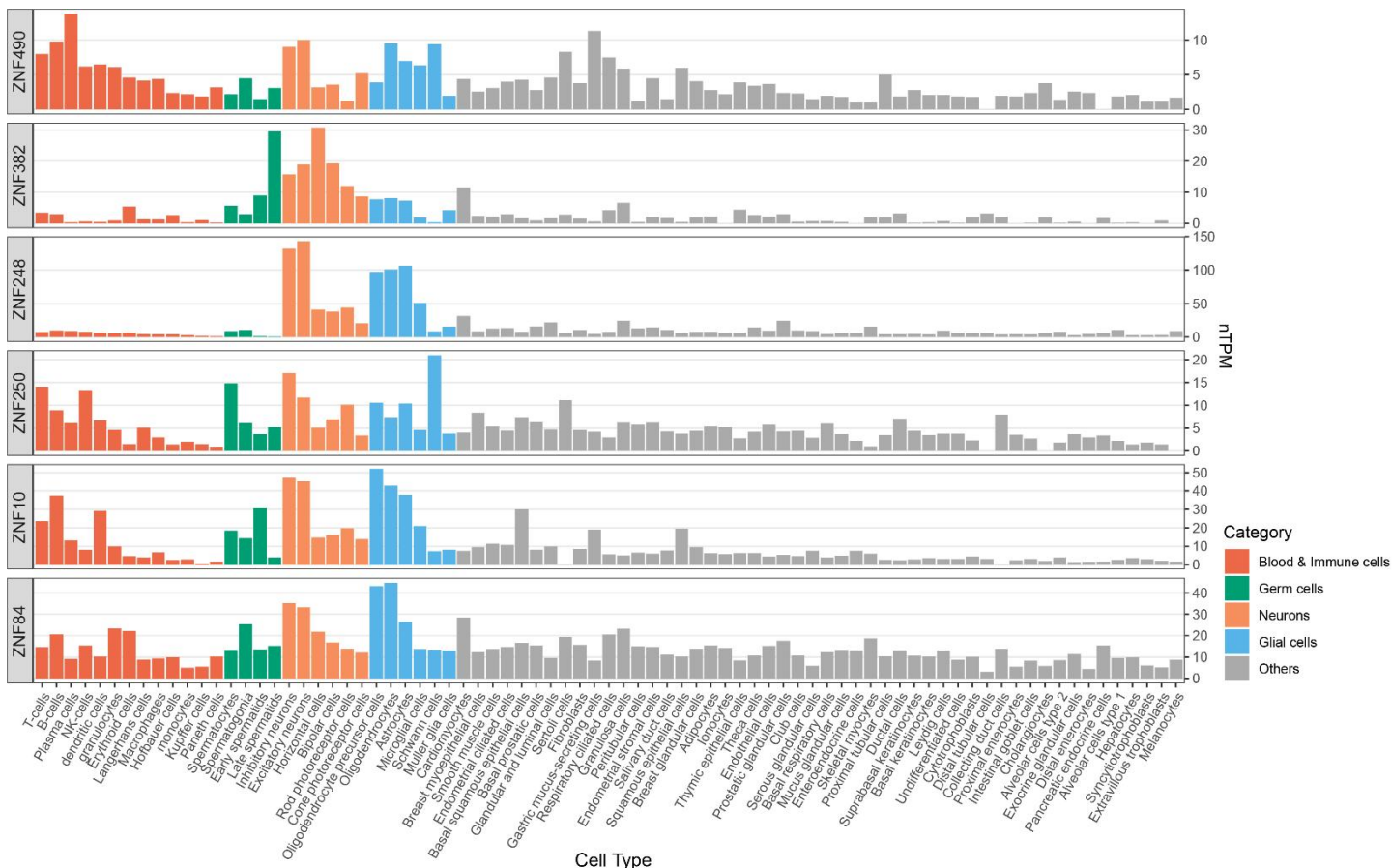


Figure S7 Expression levels of ZNFs over human cell types by Human Protein Atlas

| REAGENT or RESOURCE | SOURCE | ACCESS IDENTIFIER |
|--|---------------------|---|
| Software, Algorithms, and Analysis workflow | | |
| MEME | MEME suite | http://meme-suite.org/ |
| TECookbook | Zheng Zuo | https://github.com/zeropin/TECookbook |
| TFCookbook | Zheng Zuo | https://github.com/zeropin/TFCookbook |
| Analysis of ZNF10 and ZNF382 | Zheng Zuo | https://github.com/zeropin/ZFPCookbook |
| Data source | | |
| ZNF10 and ZNF382 Spec-seq data | Zheng Zuo | NCBI GEO GSE189817 |
| Zinc finger motif database | Hughes Lab | http://kznmotifs.cabr.utoronto.ca/ |
| ChIP-exo data for ZNF10, 84, 248, and 382 | Trono lab | NCBI GEO GSE78099 |
| ChIP-seq data for ZNF250 and ZNF490 | Hughes Lab | NCBI GEO GSE76496 |
| Expression levels of ZNF382 and ZNF248 | Human Protein Atlas | https://www.proteinatlas.org |
| ZNF genes association with phenotypes | GeneBass | Genebass.org |
| UCSC repeat browser | UCSC | https://repeatbrowser.ucsc.edu/ |

Table S1 Key resources table