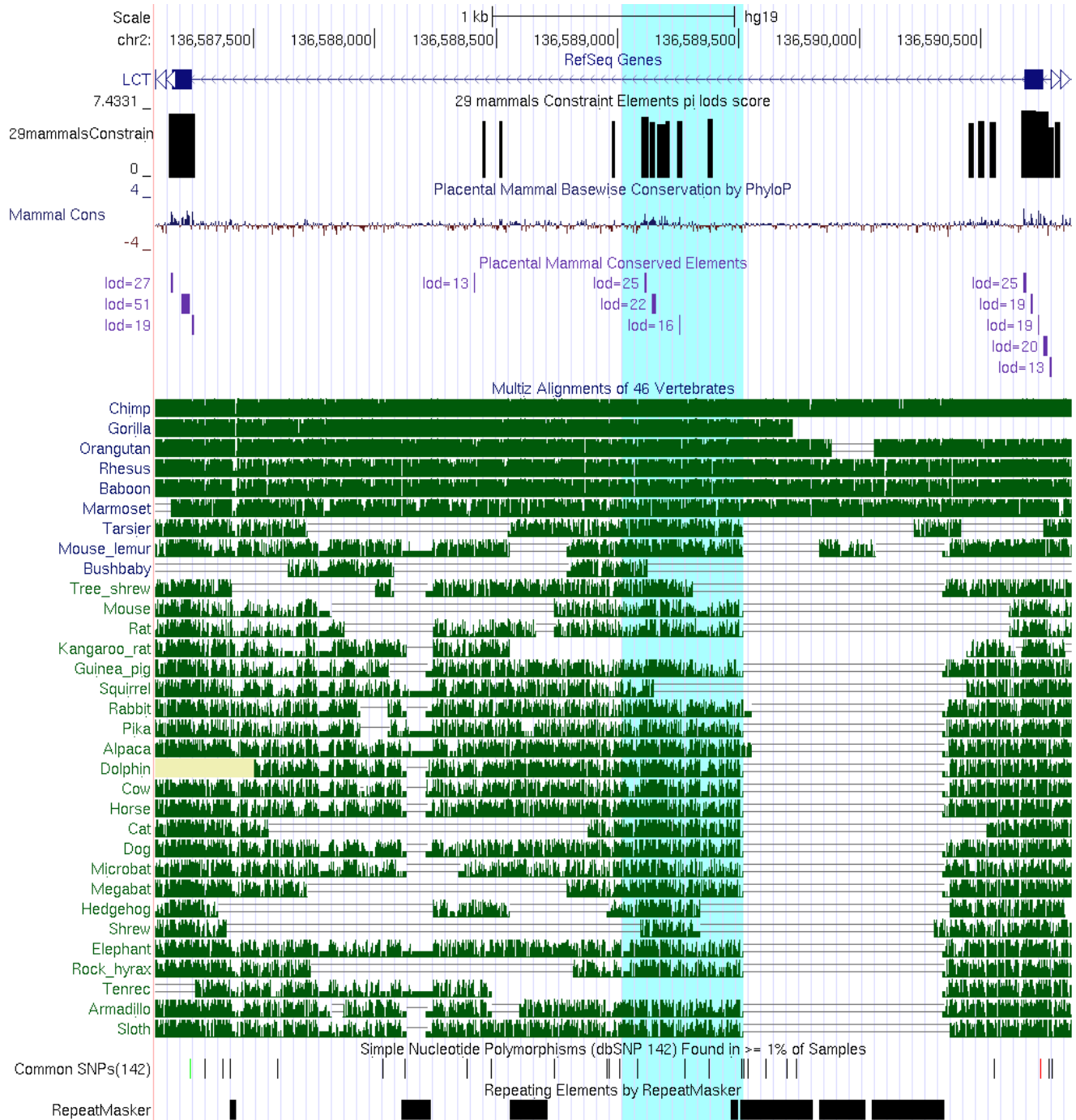
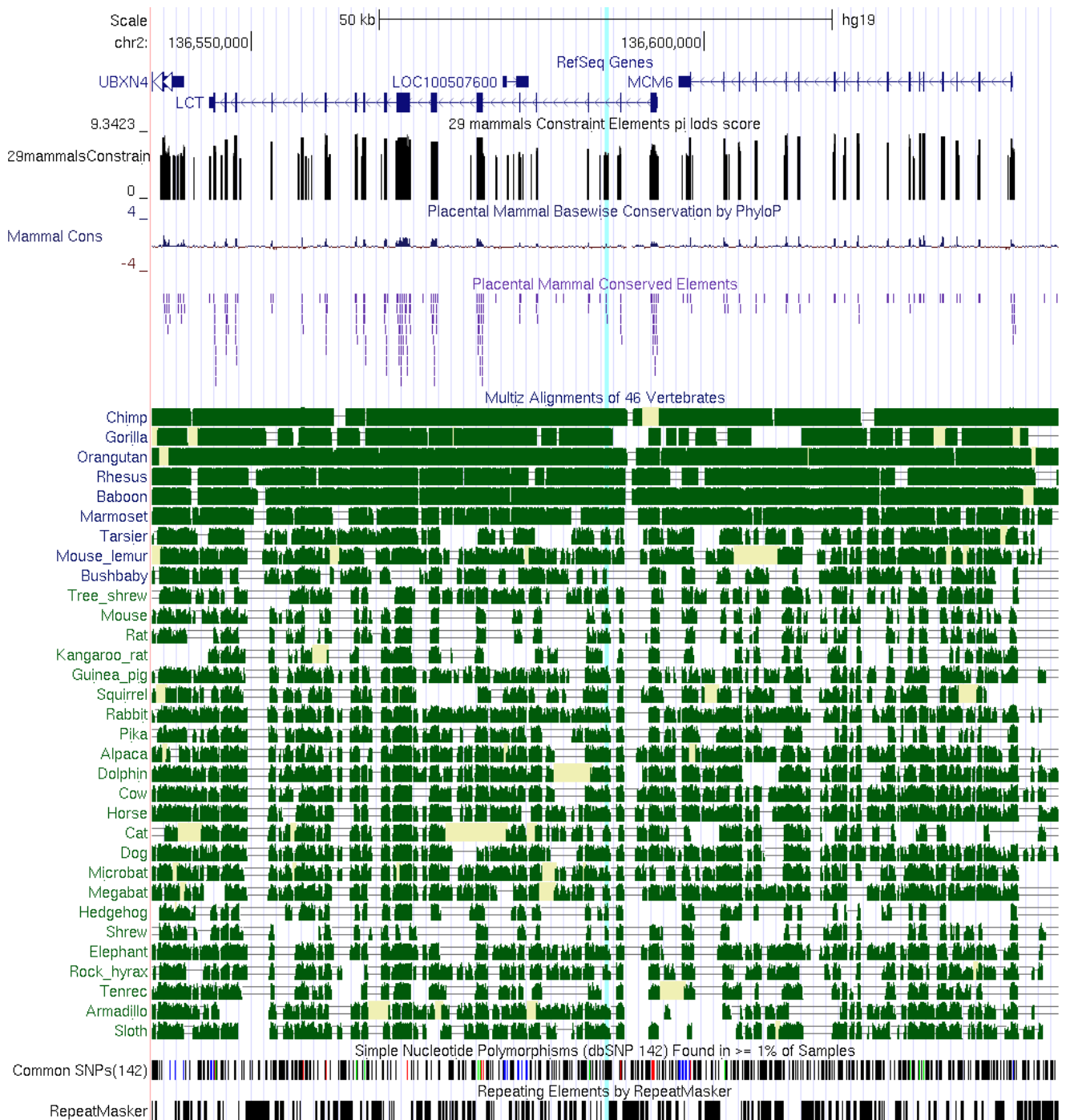


## Supplementary Note 1



**Evolutionary conservation of the enhancer element at *LCT* intron 2.** Human (GRCh37/hg19) UCSC genome browser tracks showing high sequence conservation at the epigenetically-controlled region we identified in *LCT* intron 2 (highlighted in blue). Mammals show a sequence conservation peak and an enrichment in conserved elements at this *LCT* intron 2 region.



***LCT* intron 2 shows substantial evolutionary conservation compared to other introns in *MCM6* and *LCT* region.** Human (GRCh37/hg19) UCSC genome browser tracks showing sequence conservation at *LCT* and *MCM6* locus. Mammals show high sequence conservation in the regulatory region we identified in *LCT* intron 2 (highlighted in blue). Outside of exons, sequence conservation at *LCT* and *MCM6* is uncommon.