10 20 30 40 50 60 70 80 90 100

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Human AAAATGAAGGTAAATTTTAACTTGAATCGATCTAGACTGTTTATAATGGAATCTGTTG---CCTAGCATAAGTTA--AGCATGTTGAGGTCACAAA-GGA

Chimp AAAATGAAGGTAAATTTTAACTTGAATCGATCTAGACCGTTTATAATGGAATCTGTTG---CCTAGCATAAGTTA--AGCATGTTGAGGTCACAAA-GGA

Orangutan AAAATGAAGGTAAATTTTAACTTGAATCGATCTAGACTGTTTATAATGGAATCTGTTG---CCTAGCATAAGTTA--ACCATGTTGAGGTCACAAA-GGA

Rhesus AAAATGAAGGTAAATTTTAACTTGAATC-ATCTAGACTGTTTATAATGGAATCTGTTG---CCTAGCATAAATTA--ACCATGTTGAGGTCACAAA-GGA

Marmoset AAAATGAAGGTAAATTTTAACTTGAATAGATCTAGACTGTTTATAATGGAATTTGTTG---CCTAGCATCAATTGTGACCATACTGAGGTCACAAA-GGA

Cat ACCCTGAAGGTAAGTTCTAATTTGAATGGATCTAGACTGTTTATAATGAAACCTGTTA---CTTTGCATAAATTA--ACCCTATTGAAGTC-CAAA-GGT

Horse AGCCTGAAGGTAGGTTTTAACTTGAATAGACCTAGTCTGTT-ATAATGAAACCTGTTA---CCTTGCATAAATTA--ACCATATGGAGGTCATAAA-GGA

Rabbit -CTCTGAAGCCTAGTTCTAACTTGAATGGGTCTAGAATCTTTATAATGGAAGCCGTTA---TCTTACATAACTCA---CCATGTTCAGATTACAAA-ACA

Rattus GCCCTGGATACGATTTCTGTCTTGGATTCTTATGGACTGTTTATAATTGGCCCTATTA---CCTTGCATAAGTTA--GCCATGCTGAGGTTGCAAAAGGG

Mouse GCCCTGAAGGCAATTTCTAAGTTGGATAGTTACAGACTGTTTATAATTGGACCTATTATTACCTTGCATAAGTTA--GCTATGTTGAGGTTGCAAAAGGA

110 120 130 140 150 160 170 180 190 200

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Human TAAGAAATTACCCTTAAGGGATGAAAATTCTTTAGAATAGAATGCAGTAGGCCCACGCAAACAACAACGTGTATAAATAGCTTAAATTAGCCTGTTTTTG

Chimp TAAGAAATTACCCTTAAGGGATGAAAATTCTTTGGAATAGAATGCAGTAGGCCCACGCAAACAACAACGTGTATAAATAGCTTAAATTAGCCTGTTTTTG

Orangutan TAAGAAATTACCCTTAAGGGATGAAAATTCTTTGGAATAGAATGCAGCAGGCCCACGCAAACAACAACGTGTATAAATAGCTTAAATTAGCCTGTTTTTG

Rhesus TACGAAATTACTCTTAAGGGATGAAAATTCTTTGGAATAGAATACAGTAGGCCCACACAAACAAGAATGTGTATAA--------AATTAGCCTGTTTTTG

Marmoset TAAGAAATTACCCTTAAGAGATGAAAATTCTTTGGAATAGAATGCAGTAG-CCCACACAAACAGGAATGTGCATAAATAGCTTAAATTAGCCTGTGTTTG

Cat TAGGAAATTATCCTAAAGGAACAAAATTGTTT-----------ACAGTTGGGCCATCTAAACAAGCATGTGTATAAATAGCTTGAATTAGCCTATGTTTG

Horse TAGGAAATTATCCTAAAGGAATGAAATTGTTT-----------GCAGTAGACCCATCTAAACAAGAATGTGTATAAATAGCTTGAATTAGCCTGTGTTTG

Rabbit TAGGGCGTTGTCATAAAGGGATTAAAACTCTTTGGAATAGAATGTAGTAGGCCTATCTAAGCAAGAGCTTGTACAGGTCGCTTACATTAGCCTGTGTTTG

Rattus CGAGAGGTTCCTC----AGGATGGAAATTGTTT----------GGAATAG---------GACAAGGGCATGCCCAAACCGCTTCAGTTA-TCTGTGTTTG

Mouse CGGGAGGTTACTC----AGGATGGAAACTGTTT----------GGAATAG---------AACAAGGACATGCCCAAACCGTTTCAATTA-TCTGTGTTTG

210 220 230 240 250 260 270

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Human C-----CTAAGTACATTAACTCAAAAGGAAACTCGGTTTAAGAAGTTCACTCCAAAAATAGTGCAAGAAGC

Chimp C-----CTAAGTACATTAACTCAAAAGGAAACTTGGTTGAAGAAGTTCACTCCAAAAATAGTGCAAGAAGC

Orangutan C-----CTAAGTACATTAACTCAAAAGGAAACTTGGTTTAAGAAGTTCACTCTAAAAATAGCGCAAGAAGC

Rhesus C-----CTAAGTACATTAACTCAAAAGGAAACTTGGTTTAAGAAGTTCACTCTAAAAATAGTGCAAGAAGC

Marmoset C-----ATAAGGACATTAACTGGAAAGGAAACTTGGTTTAAGAAGTTCACTTTAAAAATTGTGCAAGAAGC

Cat CTTGTGTTAAGTACTTGAACTCAAAAGGAAACTTGGTTTAAAAAGGTCATTCTAAAAATAGTGCAAGTAGC

Horse CTTGTGCTAAGCACATTTACTCTAAAGGAACCTTCTTTTAAAAAATTAAATCTAGAAACAGTGCAAGTAGC

Rabbit CTTGTGCTAAGTATATTAACCCAGAAAGAAACTTGGTTTTTGAAGGTCAATCTAAAAACAGTTCTGGAAGC

Rattus CTTG--T-----GCCGTGATCCAGAAAGAGATTTCATGTAGGAAT-CAGTCTTAAAATAAAAGCTGGGTC-

Mouse TTTG--TTTTGTGTCATGATCCTGAAAGAAATTTTGTGTAGGAGTTCAATCTTAAAATGAGCGTTGAGTT-

**S5 Fig. Homology of the mouse *Ccnb1ip1* insulator DNA sequence with orthologous sequences in humans, chimps, orangutans, rhesus macaques, marmosets, cats, horses, rabbits, and rats.** Conserved sequences are highlighted.