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Drosophila melanogaster Cu, Zn superoxide dismutase gene sequence

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A Cu, Zn superoxide dismutase gene sequence was obtained from a clone isolated from the genomic library of *D. melanogaster* Canton S in the Charon 4 vector (1) by hybridization with cDNA (2) from a *D. melanogaster* Oregon R strain (3). The 1844 bp sequence shown below (transcribed region capitalized) differs from an Oregon R genomic SOD sequence (4) by only 3 substitutions (underlined). Pairwise comparisons of the sequences corresponding to the second exon show that our Canton S sequence differs by one transition from the genomic Oregon R sequence but by two from the cDNA Oregon R; whereas the Oregon R genomic and cDNA differ from each other by three transitions.

gaattcctggattcgtttttttatatacaaaacaaagtgaaattgaaatgcttccgcccactgtcattggaaataa -271
tggaaagcctcccaagtgaaaccacccttctgtgaaacagctcaaaaaattcaacgccatttggcagtaaaattgttccgttttcaaat -181
tgaattttagctctttatctcttcaaaatgtaaaatgccccaaataacagctgagcttgaattattcaaaagaaaaatgcttccagt -91
aaagcctaaatagttgaaagaaacttttgcacaactgaaacactaacagtaaaagttccgcagtgatttctaaagctgctcgtcaggtc -1
ACACCATAGAAGTACCTGGAAAGTCTCAACTTTTTTCGTTTTGATAAATTGATTAATTCATTCGAAATGGTGGTAAAGCTGCTCGC 90
M V V K A V C
TAATTAACGGCGATGCCAAGGGCACGGTTTTCTCGAACAGGAGGTGAGAATCCAAAATCATTGAACTTCTCTGCTCGGCAAAATGTAC 180
V I N G D A K G T V F F E Q E
GAAAAACAGAAGTCTAAAGGTCAAATAGCCGGCTGCACCGCGGCCCTTCCACTTCAATATGCTGCTTTAAATTCGTGCGAGCAT 270
TTTAAATTAAGTCCGATTTGAGTTTAGCCCTAGTCACCCAGCAAGTGCACCTTTATATTTATATAAGCCGCACCAAAATGCCCATATGTT 360
GTGCGCTCAAGTCCCTACAGCAAAGGTCACGAAATAGTACTGGACATAAAAAGGAGTTAAGATATAAAGCTCACTTGTTCGTAAGTAT 450
CGTTAAATATCAACAAATATTTGTTTTAGAATAAGCATTAGGAAATATGGGAATAATAGAATGATGCTGTTCAATTAATTTGTACATC 540
AAAGTCAAAGCAGCAATGTCAAGTGTCAAGTAAACGATTAAACTTGATGATTACAGGTATGTTTCAAGTCCGAGGAAATTTATGTTT 630
TTAATCTATAAAGATAACCAAATGTTTACTTTGCTGCTATAAATATTCGGTTAAAGCTGCTCTATTAACAAATGTTATTTTCATAAA 720
TAACTTATATCATATGAAGTTGGCCACGCTGTTATCATATAACAGTCTTCTGCTCACTATTATACACAACTTGTGCTTATCAGTATT 810
CGAGTATTATCTGAAGCGTTATAACCAATCCCTTATCCCGTCCACAGGACGCGTACGCCCGTGAAGGCTCCTCGGTGAGGTGTCGG 900
S S G T P V K V S G E V C G
CCTGCCAAAGGCTGACGAGTATCCACGTCACGAGTTCGGTGACAACACCAATGGCTGCATGCTGCTCGGACCCGCTCAATCCGTA 990
L A K G L H G F V H E F G D N T N G C H S S G P H F N P Y
TGGCAAGGAGCATGGCCGCTCCCGTCGACGAGAATCGTCACCTGGCGCATCTGGGCAACATGAGGCCACCGGCACTGCCCCACCAAGT 1080
G K E H G A P V D E N R H L G D L G M I E A T G D C P T K V
CAACATCACCAGCTCCAAGATTACGCTCTCGGGCCGCAAGCATCATCGGACACCGCTTGTGCTGACGCCGATGCCGATGATCTGG 1170
M I T D S K I T L F G A D S I I G R T V V V H A D A D D L G
CCAGGGTGGACAGGCTGAGCAAGTCAACGGGCAACGCTGGTGCCTGATCGGGTCCGGCGTATTGGCATTGCCAAGGCTCAAGCGAT 1260
Q Q G H E L S K S T G N A G A R I G C G V I G I A K V
AATCTATTCGATGCTGGCCACTGTCTGATCTACTCTAATTTAGCACTACCCACTGGAGATATCAAAACGATATACATACTTCTAAACAT 1350
AAATACATAGCCTGTGGTCTGTTAGTGTGATACGCAACCTTTGAGGTTCAATAAATTTGGTTTTGAAATGGCCCAATAACaaaggttat 1440
egttttcatttgagttgagatggaagatgaatatatcacttgttctcgacgaattc

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