Nucleotide sequence of *Coxiella burnetii* superoxide dismutase

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The superoxide dismutase (SOD) (EC. 1.15.1.1) gene of the rickettsia, *Coxiella burnetii*, has been localized to a 4.4 kb genomic DNA insert cloned into the cosmid vector pHCT9. The clone, termed pSJR50, was isolated by employing a *C. burnetii* SOD-specific probe that was generated using degenerate primers and polymerase chain reaction. Nucleotide sequence analysis revealed an open reading frame (ORF) of 579 base pairs. The deduced amino acid sequence from this ORF displays considerable homology with known Mn/Fe superoxide dismutase sequences (1). The predicted M_r of 22,273 agrees favorably with the M_r of the primary product produced by pSJR50 *C. burnetii* DNA as demonstrated by *in vitro* transcription/translation and SDS-PAGE.

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REFERENCES

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1  ATGGCTTTTGAATTACCGGATTTGCCCTACAACTCAACGCACTGGAACCGCATATCTCT  60
   M A F E L P D L P Y K L N A L E P H I S
61  CAAGAAACGCTCGAATATCACACGGAACACCATAGAGCTTATGTCAATAAACTCAAC  120
   Q E T L E Y H H G K H H R A Y V N K L N
121 AAAGTTATCGAAGGCACCCCTTTTGAAGGAACTCTGGAAGAAATTATTCGAAATCC  180
   K L I E G T P F E K E P L E E I I R K S
181 GACGGCGGAATCTTCAACAATGCAGCACAACTTGAACCATATTTTATGGCACTGC  240
   D G G I F N N A A Q H W N H T F Y W H C
241 ATGAGCCCTGATGGCGGTGGAGATCCTTCTGGCGAATTGGCTTCAGCTATTGATAAACT  300
   M S P D G G G D P S G E L A S A I D K T
301 TTTGGATCTTTAGAGAAATTTAAAGCGCTTTTACCGACTCCGCAAATAATCATTTCCGC  360
   F G S L E K F K A L F T D S A N N H F G
361 TCGGGATGGGCTTGGCTCGTTAAAGATAACAATGGCAAATTAGAAGTCTTAAGCACTGTC  420
   S G W A W L V K D N N G K L E V L S T V
421 AACGCTCGTAATCCCATGACTGAAGGCAAAAAACCCCTAATGACTTGTGATGTTTGGGAA  480
   N A R N P M T E G K K P L M T C D V W E
481 CACGCTATTACATCGATACCCGGAACGACCGCCCCAAATACGTTAATAACTTTTGGCAA  540
   H A Y Y I D T R N D R P K Y V N N F W Q
541 GTGGTCAATTGGGATTTTGTGATGAAAACTTCAATCCTAA  582
   V V N W D F V M K N F K S

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