Cu-Zn superoxide dismutase (EC 1.15.1.1) is a eukaryotic cytoplasmic enzyme involved in the antioxidant defense against the toxic effects of superoxide anion-induced cellular damage (1). We have isolated cDNA clones from a murine SWR/J liver cDNA library (2) using the human cDNA clone pS61-10 as a heterologous probe (3). The nucleotide and deduced amino acid sequence of one of these clones containing the entire coding region is shown below. The murine enzyme is coded for by 459 nt after ATG followed by a single stop codon. The deduced amino acid sequence exhibits 83.7% identity to the human enzyme (3) and 96.7% identity to the rat enzyme (4). The 3'-non-coding end following TAA is 66 nt in length and contains an uncommon polyadenylation signal, ATTAAA, 16 nt upstream of the poly(A) tail. This clone hybridizes to a single band of RNA isolated from mouse liver with a molecular size between 0.5-0.6 kb.

| Met | Ala | Met | Lys | Ala | Val | Cys | Val | Leu | Lys | Gly | Asp | Gly | Pro | Val | Gin | Gly | Thr | He | His | Phe | Glu | Gin |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 70  | 80  | 90  | 100 | 110 | 120 | 130 | 140 |

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