

Nucleotide sequence of cDNA for murine myeloperoxidase

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A cDNA encoding murine myeloperoxidase (MPO) was cloned and sequenced from a PUC19 library derived from a hemopoietic progenitor cell line induced to differentiate into promyelocytes (1). The sequence of the longest cDNA clone (mMPO6) has 85% homology to the human cDNA sequences (2,3,4). At the 5' end, the first 500 nucleotides of the cDNA do not show homology to the human cDNA sequences or to the human MPO gene sequence up to the identified initiation of transcription site (5). They are homologous (72%) to human DNA sequences immediately 5' and up to 1kb upstream of the initiation of transcription site. Five other independent murine MPO cDNA clones initiated at different sites but all within the first 500 bp of the longest clone indicating that the sites of initiation of transcription of the mouse MPO gene are further upstream than that of the corresponding human gene. At the 3' end of the murine cDNA there is no homology to the human cDNAs or genomic clones downstream of the TAG codon. Brackets indicate regions coding for light and heavy subunits of MPO.

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1 AGA CTG GAG CCC CCA GGA CCC TTC TTC CTG AGA AGC CTA ACT GTC TTC AGC CAG ATT TCC TGT CTC CTC AGC CCC ACT GAG AGC TGG GGG GGG GGG GTC 99
100 TAC TAA GGT TGG AGT GGG GGT GAC TTT GAG GCC CGA GGC CCT CAA GGG GGT CAA GCA TTG CTA CAT CTT CCC TGT GAC CCT CCC CTC TCT CCA TGG GGC 198
199 TAC GCT ACT CCC CAT AAG TTC TGA GCT TTA GCT CCC TGA ATT TTG GTT CTT TCA AAG GAT TTG GGA CAC TGA GTT TAA CCA ACA CTT TGA GGG GCT GGT 297
298 TGT TTG TGC TCT CCG GGA GAA GCT CTG ATC CAT TCC TTT GTC CAC CCC ACC TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT 396
397 AGT CTA GTC TTG GGA TAG TGC CAT CTC TTT TTA GGT CAG CCC GCC CCC ACC TTT TAC ACC CCA GGC ATA AAA ACC CGT TGT CAG TGA GAG GAG GAG ACA 495
496 GTG TCA GAG ATG AAG CTA CTC TTG GGC TTG GCA GGC CTC CTG GCC CTT CTG GCC ATG CTT CAG ACC TCC AAT GGT GGC ACC CCA GCT CTC CTG GGC GAA 594
595 CTG GAC AAT TCA CTT CTG CTG AGC TGT ATG GAA GAG GGC AAG CAG CTA CTG GAC AGA GGC TAC AAG GAG GGG AGA GGA GAC ATC AAG CGG ACG CTC CAA 693
694 AGC GGC TCT GCC AGC CCC ACG GAG CTC GTG TTT TAC TTC AAG CAG CCG GTG GCG GGC ACC AGA ACA GCT GTG AGG GCC GCT GAT TAT CTA CAT GTG GCC 792
793 CTA GAC CTG CTG AAG AGG AAG CTG CAG CCC CTG TGG CCA AGG CCT TTC AAT GTT ACA GAT GTG TTG ACA CCT GCT CAG CTG AAT CTG TTG TCC GTG TCA 891
892 AGT GGC TGC GCC TAT CAG GAC GTG GGG TTG ACA TGC CCA CCG AAT GAC AAG TAT CCG ACC ATC ACT GGA CAC TGC AAC AAC CCA GCA ACC CCA CTT CTG 990
991 GGG GGC TCC AAG CGT GCT TTT GTG GCG TGG TTG CCC GCA GAG TAT GAA GAT GGT CTG TCC ATG CCC TTT GCG TGG ACG CCA GGA GTC AAT CCG AAT GGC 1089
1090 TTC AAG GTG CCC CTG GCT CCG CAG GTC TCT AAC CCC ATC GTG CCG TTC CCC AAC GAT CAG CTG ACC AAG GAC CAG GAG CCG GCA CTC ATG TTC ATC CAG 1188
1189 TGG GGA CAG TTT CTG GAT CAT GAC ATC ACC TTG ACT CCA GAG CCA GCT ACC CCG TTT TCC TTC TTC ACT GGC CTG AAC TCG GAC ACC ACG TCC CTC CAG 1287
1288 CAG CCA CCC TCC TTC CCC CTG AAG ATT CCA CCC AAT GAC CCT CGA ATC AAG AAC CAA AAG GAC TGC ATC CCC TTC TTC CCG TCC TCG CCG GCA TGC ACC 1386
1387 AGG AAG AAG ATC ACG ATT CCG AAG CAG ATC AAG GCT CTC ACT TCC TTC GTG GAC CCC ACT GGG GTG TGC GGC ACG GAG CAC CCC CTA GGC AGA AAG CTC 1485
1486 CCG AAC CTC ACC AAC CAG CTG GGG CTC GTG GCT GTC AAT ACA CGA TTC CAA GAC AAT GGC AAG GGC CTG ATG CCC TTT GAC ACC CTG CAC GAT GAC CCC 1584
1585 TGC CTC CTC ACC AAC CCC TCC CCC CCG ATT CCT TGT TTT CTG GCA GGG GAC ATG CCG TCC AGC GAG ATG CCG GAG CTC ACC TCC ATG CAC ACC CTC TTT 1683
1684 GTT CCA GAG CAT AAC CCG TCC GCC ACA CAG CTC AAG CCG CTG AAT CCT CGA TGG AAT GGG AAG AAG CTC TAC CAG GAG ACC CGA AAG ATT GTA GGG GCC 1782
1783 ATG GTC CAG ATC ATC ACA TAC CCG GAG CTC CTG CCC TTG CTG TTG GGG CCA GCA CCC ATG AAG AAG TAC CTA CCC GAG TAC GGA TCC TAC AAC GAC TCA 1881
1882 GTA GAC CCT CGA ATC GCC AAT GTC TTC ACC AAT GTC TCT GGT TAT GGC CAC ACC CTC ATC CAA CCC TTC ATG TTC CCG CTC AAG AAT CAG TAC CCG CCC 1980
1981 ACA GCG GCC AAC CCC CGA ATC CCA CTC AGC AAG GTC TTT TTT GGC AGC TGG AGA GTT GTT CTG GAA GGT GGC ATT GAC CCC ATC CTC CGA GGC CTC ATG 2079
2080 GCC ACT CTT GCC AAA CTG AAT CCG CAG AAT CAA ATT GTG GTG GAT GAG ATC CCG GAG CAG CTG TTT GAG CAA GTC ATG AGG ATA GGA CTG GAT TTT CTT 2178
2179 GCT TTT AAC ATG CAG CCG ACG CGT GAT CAG GGC CTC CCA GGA TAC AAT GCG TGG AGA CCG TTT TGT GGG CTT CCA CAG CTT ACG ACA GTG GGT GAG CTC 2277
2278 GGC ACC GTG CTG AAG AAC CTG GAG TTG GCA CCG AAG CTG ATG GCA CAA TAT GCG ACC CCC AAC AAC ATT GAC ATC TGG ATG GGC GGT GTG TCC GAG CCC 2376
2377 CTG GAA CCC AAT GGC GGT GTA GGC CAG CTC TTT GCG TGC CTC ATT GGC ACT CAG TTT AGG AAG CTA COT GAT GGT GAT CCG TTT TGG TGG GAG AAC CCA 2475
2476 GGC CTC TTC AAT AAA CAG CAG AAG CAG GGC TTG GCG ACC ATC TCC CCG CGT CTC ATC TGT GAC AAG ACT GGC ATC ACC ACC GTC TGG AAG AAC AAC 2574
2575 ATC TTG ATC TCC AAC ACA TAC CCG CCA GTC TTG AGC TGT AAC ACC CTT CTT AAA CTG AAC CTG ACT TCC TGG AAG GAG ACC TAG AGG TTG GGA GTC 2673
2674 TGC CCG GAG AAG GAC GGA GGC ATT GGC CTT CCT GTG CTA TTT GTA CTT GAG GTT CAC ACT AAT AAA A 2740
    
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