Murine polyubiquitin mRNA sequence

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A cDNA clone, p-mal-3, was isolated from a squamous cell carcinoma library based on its overexpression in mouse skin papillomas and squamous cell carcinomas compared to normal epidermis (1). Using an oligonucleotide to the 3′ end of p-mal-3 as a probe, a nearly full length cDNA clone of this message was isolated from a λgt10 library made from the transformed murine epidermal cell line PDV-C57 (2). Sequencing revealed a predicted amino acid sequence of four tandem repeats of the conserved protein ubiquitin (3). The clone 3JSF includes 62 5′ untranslated bases, the four ubiquitin tandem repeats, 152 3′ untranslated bases including the polyadenylation signal, and a poly A tail of at least 35 bases. 34 more 5′ untranslated bases were determined by primer extension to within 1−2 bases of the cap site. Independently, another clone of this cDNA was isolated from a lymphocyte library (Dr. Thomas St. John, Fred Hutchinson Cancer Research Center, Personal Communication).

ACKNOWLEDGEMENT

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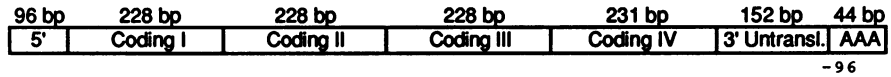
Polyubiquitin mRNA

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                                                          TNACGAGAGGCT
                        -62
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1
ATGCAGATCTTCGTGAAGACCCTGACCGGCAAGACCATCACCCTAGAGGTGGAGCCCAGTGACACCATCGAGAACGTGAAGGCC
 M  Q  I  F  V  K  T  L  T  G  K  T  I  T  L  E  V  E  P  S  D  T  I  E  N  V  K  A
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 K  I  Q  D  K  E  G  I  P  P  D  Q  Q  R  L  I  F  A  G  K  Q  L  E  D  G  R  T  A
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 S  D  Y  N  I  Q  K  E  S  T  L  H  L  V  L  R  L  R  G  G
229
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 M  Q  I  F  V  K  T  L  T  G  K  T  I  T  L  E  V  E  P  S  D  T  I  E  N  V  K  A
AAGATCCAGGATAAAGAGGGCATCCCCCCTGACCAGCAGAGGCTGATCTTTGCCGGCAAGCAGCTGGAAGATGGCCGCACCCTC
 K  I  Q  D  K  E  G  I  P  P  D  Q  Q  R  L  I  F  A  G  K  Q  L  E  D  G  R  T  A
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 S  D  Y  N  I  Q  K  E  S  T  L  H  L  V  L  R  L  R  G  G
457
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685
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 S  D  Y  N  I  Q  K  E  S  T  L  H  L  V  L  R  L  R  G  G
916
TAATTATTCGGTCTGCATTCCCAGTGGGCAGTGATGGCATTACTCTGCACTCTAGCCACTTGCCCCAATTTAAGTTTAGAAATT
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