

Nucleotide sequence of cloned cDNA specific for rat ribosomal protein L7a

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The cDNA coding rat ribosomal protein L7a was isolated from a cDNA library constructed from 14-16S poly(A)⁺RNA prepared from regenerating rat liver. It contains 851 nucleotides and a poly(A) stretch. A single open reading frame of 801 nucleotides codes a protein consists of 265 amino acids with a molecular weight of 29,863 without the N-terminal methionine not found in the authentic protein (1). Rat ribosomal protein L7a is homologous to the mouse *Surf-3* gene product (2) and also to the product of a human gene which activate the receptor kinase domain of the *trk* oncogene by recombination (3). The extent of identity of the nucleotide sequence is 95% with the mouse cDNA and 89% with the human cDNA. At amino acid level, these three sequences are identical except that the 192nd residue is arginine in human and rat but histidine in mouse.

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CGAGCGGATGCCCAAAGGAAGAGGCCAAGGGGAAGAAGGTGGCCCGGCCCGCGTGGTCAAGAAACAAGAGGCCAAAAGGTGGT    90
      M P K G K K A K G K K V A P A P A V V K K Q E A K K V V
CAATCCTTTGTTTGAGAAAAGGCTAAGAACTTCGGCATTGGCAGGACATCCAGCCAAAAGAGATCTCAGCGCTTCGTCAAATGGCC    180
      N P L F E K R P K N F G I G Q D I Q P K R D L T R F V K W P
CCGCTACATCAGGCTGCAGCGGCAAGAGCCATCCTCTATAAGCGGCTCAAAGTACCTCCTGCCATCAACCAGTTCACCCAGGCCCTGGA    270
      R Y I R L Q R Q R A I L Y K R L K V P P A I N Q F T Q A L D
CAGGCAAAACAGCGACTCAGCTGCTTAAGCTTGCCCAAGTACAGGCCAGAGACAAGCAGGAGAAAGAGCAGAGGCTGCTGGCCCGCCG    360
      R Q T A T Q L L K L A H K Y R P E T K Q E K K Q R L L A R A
TGAGAAGAAAGCTGCTGGCAAAGGGGACGTCCTCAACTAAGAGACCACCTGTCTCCGAGCAGGGGCTCAATCAGCTCACCACCTTTGGTGA    450
      E K K A A G K G D V P T K R P P V L R A G V M T V T T L V E
GAACAAGAGGCTCAGCTGGTGGTGAATGCCATGATGAGACCCCAATTGAGCTGGTGGTTCCTGCTGCCCTGTGTCCAAAGATGGG    540
      N K K A Q L V V I A H D V D P I E L V V F L P A L C R K M G
GGTGCCTACTGCATCATCAAGGGAAGGCCAGGCTGGGGCCGCTGGTCCACAGGAAGACATGCACCAGTGTTCCTTCACACAGGTGAA    630
      V P Y C I I K G K A R L G R L V H R K T C T T V A F T Q V N
CTCGGAGACAGGGTGTCTGGCTAAGCTGGTGGAGCTATTAGGACCAATTATAATGACASATATGACGAGATCCSCCGCCACTGGGG    720
      S E D K G A L A K L V E A I R T N Y N D R Y D E I R R H W G
AGGCAAGCTCCTGGTCTAAGTCTGTGGCTCGCATTGCCAAGCTGGAAAAGGCAAGGCTAAAGACTCGCCACTAAGCTGGGTAAAT    810
      G N V L G P K S V A R I A K L E K A K A K E L A T K L G *
GTACACTTAAGTTTTCTGTACATAAATAAATTACAAAGTT poly(A)    851

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