Nucleotide and deduced amino acid sequences of baboon urokinase-type plasminogen activator

Y.P.Tina Au*, Trevina W.Wang and Alexander W.Clowes

Department of Surgery, University of Washington, Seattle, WA 98195, USA

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We have isolated and sequenced (1) a urokinase-type plasminogen activator (uPA) cDNA clone from a baboon (*Papio cynocephalus*) aortic smooth muscle cell λ gt 11 cDNA library using a human uPA cDNA probe (2). The uPA cDNA clone is 1597 bp long; it consists of a 101 bp 5' non-coding region, a 1299 bp coding region, and a 197 bp 3' non-coding region. The deduced baboon uPA amino acid sequence overall is 93%, 79% and 68% homologous to human, porcine and mouse uPA respectively (2, 3, 4). The uPA amino acid sequence at the receptor binding region (amino acid 12–32) (5) is less conserved; the baboon sequence is 86%, 68% and 64% homologous to human, porcine and mouse sequences respectively.

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GGGCGGACCCAGCTCAGGGTCCACCTGTCCCGCAGCGCGGCTGGCGGCTCTCTGCGCGACCCG
      M R A L L A H L L L C V L -8
AACCGCGCTAGCGCCCGACCTCACCACCATGAGAGCCCTGCTGGCACACCTGCTTCTCTGCGTCTG
V V S A S K G S R E L Q V P S D C G C L N G G 16
GTCTGAGCGCATCCAAAGGCGAGCTGAAGTTCAGTTCATCAGACTGGCTGTCTAAATGGAGGAA
T C H S N K Y F S S I H W C N C P K K F G G Q H 40
CATGTATGTCCAACAAGTACTTCTCCAGCATTCAGTGGTCACTGCCAAAGAAATTCGGAGGGCAGCA
C E I D K S K T C Y E G N G H F Y R G K A S T 63
CTGTGAGATAGATAAGTCAAAACCTGCTATGAGGGGAATGTCTACTTTTACCGAGGAAGGCCAGCACT
D T M G R S C L A W N S A T V L Q Q T Y H A H 86
GACACCATGGGCGGCTCTGCTGGCTGGAACTCTGCCACCGTCTTCCAGCAACATACCATGCCACA
R S D A L Q L G L G K H N Y C R N P D N R R F 110
GATCTGATGCTCTCAGTGGGCGTGGGAAGCACAATTACTGCAGGAACCCAGCAACCGGAGGCGACC
W C Y V Q V G L K Q R V Q E C M V H N C A D G 133
CTGGTCTATGTGCGAGTTCGGCTAAAGCAGCGTGTCCAAGAGTGCATGGTGCATAACTGTGCAGATGGA
K K P S S P P E E L Q F Q C G Q R T L R P R F 156
AAAAAGCCCTCTCTCCAGAGAATTACAGTTTTCAGTGTGGCCAAAGGACTCTGAGACCCCGCTTTA
K I V G G E F T T I E N Q P W F A A I Y R R H R 180
AGATTGTGGGGAGAATTCCACCACATCGAGAACCGCCCTGGTTTGCAGCCATCTACAGGAGGCACCG
G G S V T Y V C G G S L I S P C W V S A T H 203
GGGCGGCTGTGTCACCTACGTGTGGAGGCGAGCTCATCAGCCCTTGTGGGTGGTGCAGGCCACAC
C F I N Y P K K E D Y I V Y L G R S R L N S N 226
TGCTTCATTAAATACCAAAGAGGAGGACTACATCGTCTACCTGGGTGCTCAAGGCTTAACCTCAACA
T Q G E M K F E V E N L I L H E D Y S A D T L A 250
CGCAAGGGGAGATGAAGTTTGGAGTGGAAACCTCATCTACATGAGGACTACAGCGCTGACACGCTTG
H H N D I A L L K I R S K E G R C A Q P S R T 273
TCACCACAACGACATTGCTTGTGAAGATCCGTTCTAAGGAGGGCAGGTGTGGCGAGCCATCCCGGACT
I Q T I C L P S M Y N D P N D P P F G T S C E 296
ATACAGACCATCTGCGTGCCTCAATGTATAACGATCCTAACGATCCCCCGTTTGGCCACAAGCTGTGAGA
I T G F G K E N S T D Y L Y P E Q L K M T V V K 320
TCACTGGCTTTGAAAAAGAGAATTCTACCGACTATCTCTATCCGAGCAGCTGAAAATGACTGTTGTGAA
L V S H Q K C Q Q P H Y Y G S E V T T K M L C 343
GCTGGTTTCCACCAAGTGTGACGAGCCCACTACTACGGCTCTGAAGTCACCAACAAAATGCTGTGT
A A D P Q W E T D S C Q G D S G G P L V C S I 366
GCTGCTGACCCACAGTGGGAAACAGATTCTGCGCAGGAGACTCAGGGGGACCCCTTGTCTGTTCATCC
Q G H M T L T G T V S W G R G C A L K D K P G V 390
AAGGCCACATGACTTCTGCTGAATTGTGAGCTGGGGCCGTGGATGTGCCCTAAAGGACAGCCAGGCGT
Y T R V S R F L P W I H S H T R E O N G L A L 413
CTACACGAGAGTCTCAGCTTCTTGCCTGGATTACAGTACACCCAGGGAACAGAAATGGCTAGCCCTC
TGAGGGTCCCGAGGAGGAACCGGCATGACCCGCTTCTTGTGCTGTCTATTTTGCAGTAGAGTCATC
TCCATCAGCTGTAAGAAGAGACTGGGAAGACAGGCTCTGCACAGATGGATTCTTGTGCCACCCAGGCC
GAACCACAATAGCTTTACCCCTCAGGCATAGGCTGGGTGCTGGCGCCAGACCCCTCT

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Figure 1. The nucleotide and deduced amino acid sequences of baboon uPA. The signal peptide is indicated by negative numbers and the mature uPA is indicated by positive numbers. The termination codon is underlined.

* To whom correspondence should be addressed