

Nucleotide and deduced amino acid sequence of the rat T-cell alloantigen RT6.1

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The rat T-cell alloantigenic system RT6 comprises two known alleles, RT6^a and RT6^b. The respective protein products, designated RT6.1 and RT6.2, are expressed on mature peripheral T-cells of the rat, but not on thymocytes or recent thymic migrants (1–3). Diabetes-prone BB rats are deficient in RT6 expression, and this defect has been correlated with the pathogenesis of autoimmune insulin-dependent diabetes mellitus in these animals (4). We have recently reported the cDNA sequence for RT6.2 (5). Using oligonucleotides based on this sequence in the polymerase chain reaction, we have amplified the translated region of cDNA derived from mRNA from the RT6.1-expressing T-cell hybridoma EpSM 30 (6) as well as from Lewis (RT6^a) rat spleen cells. The sequence for RT6.1 differs from that of

RT6.2 in 18 nucleotides and encodes a single glycosylation site (NKS) not present in RT6.2.

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M P S N I C K F F L T W W L I Q Q V T G L T G P L 25
ATGCCATCAAATATTTGCAAGTTCTTCCCTAACTTGGTGGTTAATTCAGCAGGTGACTGGGCTGACAGGGCCTTTG 75
M L D T A P N A F D D Q Y E G C V N K M E E K A P 50
ATGCTAGACACGGCTCCCAATGCATTTGATGACCAGTATGAGGGCTGTGTCAACAAAATGGAGGAAAAGGCACCC 150
L L L K E D F N K S E K L K V A W E E A K K R W N 75
CTGCTTTTAAAGGAAGACTTTAATAAGAGTGAGAAATTTAAAGTTGCGTGGGAAGAGGCAAAGAAACGATGGAAC 225
N I K P S M S Y P K G F N D F H G T A L V A Y T G 100
AACATAAACCTAGTATGAGTTATCCCAAAGGTTTCAATGATTTCCATGGAACGGCTTTAGTTGCCTACACTGGG 300
S I G V D F N R A V R E F K E N P G Q F H Y K A F 125
AGTATCGGTGTAGATTTTAAACAGAGCTGTTAGGGAATTCAGGAAAATCCTGGTCAATTCCTACTACAAGGCTTTC 375
H Y Y L T R A L Q L L S N G D C H S V Y R G T K T 150
CATTACTACTTAACAAGAGCTCTTCAGCTTTTGAGTAACGGGGATTGTCATTCAGTCTACCGAGGCACTAAGACC 450
R F H Y T G A G S V R F G Q F T S S S L S K T V A 175
AGGTTTCACTATACTGGAGCTGGCTCCGTGCGATTCCGGCAGTTCACGTCTTCATCATTGTCTAAGACAGTAGCT 525
Q S P E F F S D D G T L F I I K T C L G V Y I K E 200
CAATCTCCAGAGTTTTTTCAGTGATGATGGGACGCTATTCATCATCAAACCTGCTTGGGGGTTTATATCAAAGAA 600
F S F Y P D Q E E V L I P G Y E V Y Q K V R T Q G 225
TTCTCTTCTATCCTGACCAAGAGGAGGTGTTAATTCAGGCTATGAGGTATATCAGAAAGTCAGGACACAAGGC 675
Y N E I F L D S P K R K S N Y N C L Y S S A G T 250
TACAACGAAATTTTCTGGACTCCCCGAAGAGGAAGAAGAGCAACTACAATTGCTTATACAGCAGCGCAGGAACC 750
R E S C V S L F L V V L T S L L V Q L L C L A E P 275
AGAGAGAGCTGTGTATCCCTGTTCTTGTGTTCTCACCAGTCTTCTGGTCCAGCTGCTTTGTCTTGCTGAGCCG 825
TAG 828

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