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**First nucleotide sequence of a human immunoglobulin variable  $\lambda$  gene belonging to subgroup II**


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The first nucleotide sequence of a human variable lambda gene belonging to subgroup II and designated as  $\lambda$ 2.1 is reported. This gene was isolated from the genomic  $\lambda$ 275 library (clone  $\lambda$ 275V $\lambda$ 2). That library was made with the DNA of a member of the family 275, characterized by two exceptional Gm haplotypes (1). The peptide leader of 19 codons contains a 118 base pair (bp) intron. The heptamer-nonamer recombination signal sequences are underlined and the cysteines involved in the intrachain disulfide bond are circled. The additional cysteine in the 5' region of the gene belongs to the third hypervariable region (Chuchana, P. and Lefranc, M.-P., unpublished data). The translation of the sequence shows that this gene belongs to subgroup II (2). The subclone p $\lambda$ 2EK0.3, containing a 310 bp fragment *Eco* 47 III-*Kpn* I (restriction sites overlined in the sequence below) represents a specific  $\lambda$ II probe which only detects the  $\lambda$  genes belonging to subgroup II in high stringency conditions.

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TCTGATTTTCATGAGCCCGCCTCTCTAGCAAGGGATAGACAGGCTGGGGCAGGGCCATGCTGGGGTCAACAAGAGSCAGCGCTCTCGGGACGTCTCCACC 100

ATG GCC TGG GCT CTG CTG CTC CTC ACT CTC CTC ACT CAG GAC ACA G GTGACGCCCTCCAGGGAAGGGGTCTTGGGACCTCTGG 184
M A W A L L L L T L L T Q D T 15

GCTGATCCTTGGTCTCTCTCTCAGGCTCACCGGGGCOCCAGCACTGACTCACTGGCATGTGTTTCTCCCTCTTTCAGGG TCC TGG GCC CAG 278
G S W A Q 20

TCT GCC CTG ACT CAG CCT GCC TCC GTG TCT GGG TCT CCT GGA CAG TGG ATC ACC ATC TCC TGC ACT GGA ACC AGC 353
S A L T Q P A S V S G S P G Q S I T I S (C) T G T S 45

AGT GAT GTT GGG AGT TAT AAC CTT GTC TCC TGG TAC CAA CAG CAC CCA GGC AAA GCC CCC AAA CTC ATG ATT TAT 428
S D V G S Y N L V S W Y Q Q H P G K A P K L M I Y 70

GAG GGC AGT AAG CGG CCC TCA GGG GTT TCT AAT CGC TTC TCT GGC TCC AAG TCT GGC AAC ACG GGC TCC CTG ACA 503
E G S K R P S G V S N R F S G S K S G N T A S L T 95

ATC TCT GGG CTC CAG GCT GAG GAC GAG GCT GAT TAT TAC TGC TGC TCA TAT GCA GGT AGT AGC ACT TTA C CACAGT 579
I S G L Q A E D E A D Y Y (C) C S Y A G S S T L 118

GCTCAAGTTTCATGGGAACTGAGACCAAAACCTGCCCAGGGCCTTCAGACTTCTCTCTGCTCTGAAGATGCTTCCACCAGGTCGAAGGGCTGCTG 679

CAGCGAGGCCTTGAGAATTC 699

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**References:** (1) Lefranc, G. *et al* (1982) *J. Immunogenet.* **9**, 1-9.

(2) Kabat, E.A. *et al.* (1987) ed. *Nat. Inst. Heath, Bethesda*, pp 63-77.