

Nucleotide sequences of the variable regions of a mouse monoclonal antibody MRK16

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MRK16 is a mouse monoclonal antibody generated against the multidrug transporter P-glycoprotein (1), which is widely used for the diagnosis and experimental therapeutics of multidrug-resistant tumors. Full-length kappa and heavy chain cDNA clones were isolated from a MRK16-producing myeloma cDNA library screened respectively with the correspondent variable region genomic DNA probes (2). Nucleotide sequences of the variable region genes of the kappa (A) and heavy (B) chain of MRK16 were determined. The N-terminal twenty amino acids of the purified kappa and heavy chain proteins were sequenced and found to be identical with the predicted amino acid sequences (which are indicated by underlines).

REFERENCES

1. Hamada,H. and Tsuruo,T. (1986) *Proc. Natl. Acad. Sci. USA* **83**, 7785–7789.
2. Hamada,H. (1990) *Cancer Res.* in press.

A

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CTCAGGTTGCCTCCTCAAA ATG AAG TTG CCT GTT AGG CTG TTG GTG CTG ATG TTC TGG ATT CCT
                        M   K   L   P   V   R   L   L   V   L   M   F   W   I   P
GCT TCC AGC AGT GAT GTT TTG ATG ACC CAA ACT CCA GTC TCC CTG TCT GTC AGT CTT GGA
 A   S   S   S   D   V   L   M   T   Q   T   P   V   S   L   S   V   S   L   G
GAT CAA GCC TCC ATC TCT TGC AGA TCT AGT CAG AGC ATT GTA CAT AGT ACT GGA AAT ACC
 D   Q   A   S   I   S   C   R   S   S   Q   S   I   V   H   S   T   G   N   T
TAT TTA GAA TGG TAC CTG CAG AAA CCA GGC CAG TCT CCA AAG CTC CTG ATC TAC AAA ATT
 Y   L   E   W   Y   L   Q   K   P   G   Q   S   P   K   L   L   I   Y   K   I
TCC AAC CGC TTT TCT GGG GTC CCA GAC AGG TTC AGT GGC AGT GGA TCA GGG ACA GAT TTC
 S   N   R   F   S   G   V   P   D   R   F   S   G   S   G   S   G   T   D   F
ACA CTC AAA ATC AGC AGA GTG GAG GCT GAG GAT CTG GGA GTT TAT TAC TGC TTT CAA GCT
 T   L   K   I   S   R   V   E   A   E   D   L   G   V   Y   Y   C   F   Q   A
TCA CAT TTT CCT CGG ACG TTC GGT GGA GGC ACC AAG CTG GAA ATC AAA C
 S   H   F   P   R   T   F   G   G   G   T   K   L   E   I   K
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B

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  GGAGGCAGGTCCTAGATTTGAGTTCCTCACATTCAGTGATCAGCACTGAACACGGAACCCTCACC ATG AAC TTT
                                                                      M   N   F
GGG CTG AGC TTG ATT TTC CTT GTC CTA ATT TTA AAA GGT GTC CAG TGT GAA GTG ATA CTG
 G   L   S   L   I   F   L   V   L   I   L   K   G   V   Q   C   E   V   I   L
GTG GAG TCT GGG GGA GGC TTA GTG AAG CCT GGA GGG TCC CTG AAA CTC TCC TGT GCA GCC
 V   E   S   G   G   G   L   V   K   P   G   G   S   L   K   L   S   C   A   A
TCT GGA TTC ACT TTC AGT AGC TAT ACC ATG TCT TGG GTT CGC CAG ACT CCG GAG AAG AGG
 S   G   F   T   F   S   S   Y   T   M   S   W   V   R   Q   T   P   E   K   R
CTG GAG TGG GTC GCA ACC ATT AGT AGT GGT GGT GGT AAC ACC TAC TAT CCA GAC AGT GTG
 L   E   W   V   A   T   I   S   S   G   G   G   N   T   Y   Y   P   D   S   V
AAG GGT CGA TTC ACC ATC TCC AGA GAC AAT GCC AAG AAC AAC CTG TAC CTG CAA ATG AGC
 K   G   R   F   T   I   S   R   D   N   A   K   N   N   L   Y   L   Q   M   S
AGT CTG AGG TCT GAG GAC ACG GCC TTG TAT TAC TGT GCA AGA TAC TAT AGG TAC GAG GCC
 S   L   R   S   E   D   T   A   L   Y   Y   C   A   R   Y   Y   R   Y   E   A
TGG TTT GCT TCC TGG GGC CAA GGG ACT CTG GTC ACT GTC TCT GCA G
 W   F   A   S   W   G   Q   G   T   L   V   T   V   S   A
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