

Complete coding sequences of the *ras* related *rab* 3 and 4 cDNAs

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Submitted December 23, 1987

Accession nos J03000 and J03001

Partial nucleotide sequences of *rab*3 and *rab*4 cDNAs, isolated from a rat brain library, have been recently published (1). Here, we present their complete coding sequences encompassing regions corresponding to residues 10-17 of *K-ras* (implicated in the binding of GDP/GTP to P21) that were not determined earlier. *Rab* 3 and 4 encode 220 and 213 amino acid proteins that share respectively 39 and 42% homology with YPT and around 30% homology with the P21*ras*.

Rab3
1 cccgcttctctctctggggccccctggccgacggcccccggccccgctccctgctccgacctgctccagtttagggagggcccag
ATG GCC TCA GCC ACA GAC TCT CGA TAT GGG CAG AAG GAG TCC TGA GAC CAO AAC TTC GAC TAT ATG TTC AAG ATC
Met Ala Ser Ala Thr Asp Ser Arg Tyr Gly Gln Lys Glu Ser Ser Asp Gln Asn Phe Asp Tyr Met Phe Lys Ile
CTG ATC ATT GGT AAC AGC AGT GTG GGC AAA ACC TCA TTC CTT TTC GCG TAC GCA GAC GAC TCT TTT ACT CCA GCC
Leu Ile Ile Gly Asn Ser Ser Val Gly Lys Thr Ser Phe Leu Phe Arg Tyr Ala Asp Asp Ser Phe Thr Pro Ala
TTT GTC AGC ACT GTG GGC ATA GAG TTC AAG GTC AAA ACC ATC TAC GCG AAT GAC AAG AGG ATC AAG CTG CAG ATC
Phe Val Ser Thr Val Gly Ile Asp Phe Lys Val Lys Thr Ile Tyr Arg Asn Asp Lys Arg Ile Lys Leu Gln Ile
TGG GAC ACA GCA GGA CAA GAG CCG TAC CGA ACC ATC ACC ACA GCC TAC TAC CCG GCG GCC ATG GCG TTC ATT CTA
Trp Asp Thr Ala Gly Gln Glu Arg Tyr Arg Thr Ile Thr Thr Ala Tyr Tyr Arg Gly Ala Met Gly Phe Ile Leu
ATG TAT GAC ATC ACC AAT GAG GAG TCC TTC AAT GCA GTG CAG GAC TGG TCC ACT CAG ATC AAA ACT TAC TCA TGG
Met Tyr Asp Ile Thr Asn Glu Glu Ser Phe Asn Ala Val Gln Asp Trp Ser Thr Gln Ile Lys Thr Tyr Ser Trp
GAC AAT GCC CAG GTG CTG GTG GGG AAC AAG TGC GAC ATG GAG GAG GCA GTG GTG TCC TCA GAA CGA GGC
Asp Asn Ala Gln Val Leu Leu Val Gly Asn Lys Cys Asp Met Glu Asp Glu Arg Val Val Ser Ser Glu Arg Gly
CGG CAG CTG GCC GAC CAC CTG GCG TTT GAG TTC TTT GAG GCG ACC AAG GAC AAG ACC ATT AAT GTC AAG CAG ACC
Arg Gln Leu Ala Asp His Leu Gly Phe Glu Phe Phe Glu Ala Ser Ala Lys Asp Asn Ile Asn Val Lys Gln Thr
TTT GAA GGT CTG GTG GAC GTG ATC TGT GAG AAG ATG TCG GAG TCC CTA GAT ACT GCA GAC CTT GCA GTC ACG GGT
Phe Glu Arg Leu Val Asn Glu Val Cys Glu Lys Met Ser Glu Ser Leu Asp Thr Ala Asp Pro Ala Val Thr Gly
GCC AAG CAG GGC CCA CAG CTC ACC GAC CAG CAG GCA CCA CCT CAT CAG GAT TGC GCC TCY TGA
Ala Lys Gln Gly Pro Gln Leu Thr Asn Gln Gln Ala Pro Phe His Gln Asp Cys GCA Cys ***

Rab4
503 tcccttccgtctctcggagactcggggagcagcccggcttggagctggcgcaggggagggcgcc
ATG TCC GAG ACT TAC GAT TTC TTG TTT AAG TTC TTG GTC ATT GGA AAT GCG GGA ACT GCG AAA TCC TGC TTG CTC
Met Ser Glu Thr Tyr Asp Phe Leu Phe Phe Lys Phe Leu Val Ile Gly Asn Ala Gly Thr Gly Lys Ser Cys Leu Leu
CAT CAG TTC ATT GAG AAG AAA TTC AAA GAT GAC TCA AAT CAT ACC ATA GGA GTG GAA TTC GGT CAA AAG ATA ATA
His Gln Phe Ile Glu Lys Lys Phe Lys Asp Asp Ser Asn His Thr Ile Gly Val Glu Phe Gly Gln Lys Ile Ile
AAT GTT GGT GGT AAA TAT GTG AAG TTA CAG ATA TGG GAC ACG GCT GGA CAG GAG CCG TTC AGG TGT GTC ACG ACA
Asn Val Gly Gly Lys Tyr Val Lys Leu Gln Ile Trp Asp Thr Ala Gly Gln Glu Arg Phe Arg Ser Val Thr Thr
AGC TAC TAC ABA GGT GCG GCT GGG GCA CTC CTC GTC TAT GAC ATC ACC AGC CBA GAA ACC TAC AAT GCG CTT ACT
Ser Tyr Tyr Arg Gly Ala Ala Gly Ala Leu Leu Val Tyr Asp Ile Thr Ser Arg Glu Thr Tyr Asn Ala Leu Thr
AAT TGG TTA ACA GAT GCC AGA ATG CTG GCG AGC CAG AAC ATC GTC ATC ATT CTC TCC GGG AAC AAB AAG GAC CTG
Asn Trp Leu Thr Asp Ala Arg Met Leu Ala Ser Gln Asn Ile Val Ile Ile Leu Cys Gly Asn Lys Lys Asp Leu
GAT GCC GAC CCG GAA GTC ACC TTC CTT GAA GCC TCC AAG TTC GCA CAA GAG AAT GAG CTC ATG TTC CTG GAA ACC
Asp Ala Asp Arg Glu Val Thr Phe Leu Glu Ala Ser Arg Phe Ala Gln Glu Asn Glu Leu Met Phe Leu Glu Thr
AGT CCA CTG ACT GGC GAG AAC GTC GAA GAG GCT TTC ATG CAG TGC GCA AAG AAG ATA CTT AAG AAA ATT GAA TCA
Ser Ala Leu Thr Gly Val Asn Val Glu Glu Ala Phe Met Gln Cys Ala Arg Lys Ile Leu Asn Lys Ile Glu Ser
GGT GAG CTG GAC CCC AAG AGG ATG GGC TCT GGT ATC CAG TAT GGA GAC GCC GCC TCG ABA CAG CTA CCG TCA GCG
Gly Glu Leu Asp Pro Glu Arg Met Gly Ser Gly Ile Gln Tyr Gly Asp Ala Ala Leu Arg Gln Leu Arg Ser Pro
CGA GGT ACA CAG GCT CCA AGT GCA CAG GAG TGT GGC TGC TAG
Arg Arg Thr Gln Ala Pro Ser Ala Gln Glu Cys Gly Cys ***

REFERENCES

(1) TOUCHOT, N., CHARDIN, P. and TAVITIAN A. (1987) Proc. Natl. Acad. Sci. USA 84, 8210-8214.