

Product datasheet for **RG219839**

FAK (PTK2) (NM_153831) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	FAK (PTK2) (NM_153831) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	FAK
Synonyms:	FADK; FADK 1; FAK; FAK1; FRNK; p125FAK; pp125FAK; PPP1R71
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG219839 representing NM_153831 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCAGCTGCTTACCTTGACCCCAACTTGAATCACACACCAAATTCGAGTACTAAGACTCACCTGGGTA
CTGGTATGGAACGTTCTCCTGGTGAATGGAGCGAGTATTAAAGGTCTTTCATTATTTTGAAGCAATAG
TGAGCCAACCACTGGGCCAGTATTATCAGGCATGGAGATGCTACTGATGCAGGGGCATCATTAGAAG
ATAGTGGACAGTCACAAAGTAAAGCATGTGGCCTGCTATGGATTCGGCCTCAGTCACCTGCGGTGAGG
AGGTTCACTGGCTCACGTGGATATGGGCGTCTCCAGTGTGAGGGAGAAGTATGAGCTTGCTCACCCACC
AGAGGAGTGAAAATATGAATTGAGAATTCGTTATTTGCCAAAAGGATTTCTAAACCAAGTTACTGAAGT
AAGCCAACCTTGAATTTCTTCTATCAACAGGTGAAGAGCGATTATATGTTAGAGATAGCTGATCAAGTGG
ACCAGGAAATGCTTTGAAGTTGGGTTGTCTAGAAAATACGGCGATCATACTGGGAGATGCGGGGCAATGC
ACTAGAAAAGAAGTCTAACTATGAAGTATTAGAAAAGATGTTGGTTTAAAGCGATTTTTTCTTAAGAGT
TACTGGATTCTGTCAAGGCCAAAACACTAAGAAAAGTATGATCAACAAACATTTAGACAATTTGCCAAC
TTAATAGAGAAGAAAGTATTCTGAAATCTTTGAGATCCTGTCTCCAGTCTACAGATTTGATAAAGGAATG
CTTCAAGTGTGCTCTTGGTTCAAGCTGGATTATTTCAAGTGAAGTGGCAATCGGCCAGAAAGGAATC
AGTTACCTAACGGACAAGGGCTGCAATCCACACATCTTGCTGACTTCACTCAAGTGCAAACCAATTCAGT
ATTCAAAAGTGAAGACAAGGACAGAAAAGGAATGCTACAATAAAAATAGCAGGTGCACCCGAGCCTCT
GACAGTACGGCACCATCCCTAACCAATTGCGGAGAATATGGCTGACCTAATAGATGGGACTGCGGCTG
GTGAATGGAACCTCGCAGTCATTTATCATCAGACCTCAGAAAAGAGTGAACGGGCTTTGCCATCAATAC
CAAAGTTGGCCAACAGCGAAAAGCAAGGCATGCGGACACAGCCGCTCTGTGTGTCAGAAAACAGATGATTA
TGCTGAGATTATAGATGAAGAAGATACTTACACCATGCCCTCAACCAGGGATTATGAGATTCAAAGAGAA
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CAGAGAATCCAGCTTTGGCGTTGCAATTAACAATGTAATAAAGTACTTCCGACAGCGTGAGAGAGAA
ATTTCTCAAGAAGCCTTAACAATGCGTCAGTTTGACCATCCTCATATTGTGAAGCTGATTGGAGTCATC



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ACAGAGAATCCTGTCTGGATAATCATGGAGCTGTGCACACTTGGAGAGCTGAGGTCAATTTTTGCAAGTAA
 GGAAATACAGTTTGGATCTAGCATCTTTGATCCTGTATGCCTATCAGCTTAGTACAGCTCTTGCATATCT
 AGAGAGCAAAAGATTTGTACACAGGGACATTGCTGCTCGGAATGTTCTGGTGTCTCAAATGATTGTGA
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 CACAATCCTGGAGGAAGAGAAGGCTCAGCAAGAAGAGCGCATGAGGATGGAGTCCAGAAGACAGGCCACA
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 GGTCCAGCGAAGGATTTTATCCAGCCACAGCACATGGTACAAACCAATCATTACCAGGTTTCTGGCTA
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 ACAGATTCATGGAATCATAGACCTCAGGAGATAGCAATGTGGCAGCCCAATGTGGAGGACTCTACAGTAT
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 CGAGGCAGTATTGACAGGGAGGATGGAAGTCTTCAGGGTCCGATTGGAAACCAACATATATATCAGCCTG
 TGGGTA AACCCAGATCCTGCAGCTCCACCAAGAAACCGCCTCGCCCTGGAGCTCCCGGTCTCTGGGAAG
 CCTTGCCAGCCTCAGCAGCCCTGCTGACAGCTACAACGAGGGTGTCAAGCCATGGAGGCTTCAGCCCCAG
 GAAATCAGCCCCCTCTACTGCCAACCTGGACCGGTGCAATGATAAGGTGTACGAGAATGTGACGGGCC
 TGGTGAAGCTGTATCGAGATGTCCAGTAAAAATCCAGCCAGCCCCACCAGAGGAGTATGTCCCTATGGT
 GAAGGAAGTCGGCTTGGCCCTGAGGACATTATTGGCCACTGTGGATGAGACCATTCCCCTCTACCAGCC
 AGCACCACCCAGAGATGAGATGGCACAGAAGCTATTGAACTCTGACCTGGGTGAGCTCATCAACAAGA
 TGAACCTGGCCAGCAGTATGTCATGACCAGCCTCCAGCAAGAGTACAAAAAGCAATGCTGACTGCTGC
 TCACGCCCTGGCTGGATGCCAAAAACTTACTCGATGTATTGACCAAGCAAGACTGAAAATGCTTGGG
 CAGACGAGACCACAC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG219839 representing NM_153831

Red=Cloning site Green=Tags(s)

MAAAYLDPNLNHTPNSSTKTHLGTGMERSPGAMERVLKVFHYFESNSEPTTWASIIIRHG DATDVRGIIQK
 IVD SHKVKHVACYGFR LSHLRSEEVHWHLVDMGVSSVREKYELAHPPPEWKYELRIRYLPKGFLNQFTED
 KPTLNFFYQVKSDYMLEIADQVDQEIALKLGCLEIRRSYWEMRGNALKKSNYEVLEKDVGLKRRFFPKS
 LLDSVKAKTLRKL IQQTFRQFANLNREESILKFFEILSPVYRFDKECFKALGSSWIIISVELAIGPEEGI
 SYLTDKGCNPTHADFTQVQTIQYSNSEDKDRKGMQLK IAGAPEPLTVTAPSLTIAENMADLIDGYCRL
 VNGTSQSF IIRPQKEGERALPSIPKLANSEKQGMRTHAVSVSETDDYAEI IDEEDTYTMPSTRDYEIQRE
 RIELGRICIGEGQFGDVHQGIYMSPENPALAVA IKTCKNCTSDSVREKFLQEAL TMRQFDHPHIVKLI GVI
 TENPVWII MELCTLGELRSFLQVRKYSLDL ASLILYAYQLSTALAYLESKR FVHRDIAARNVLVSSNDCV
 KL GDFGLSRYMEDSTYYKASKGKLP IKWMAPESINFRFTSASDVWFMFGVCMWEILMHGVKPFQGVKNN
 VIGRIENGERLMPPPNCPPTLYSLMTKCWAYDPSRRPRF TELKAQLSTILEEEKAQQEERMRESRRQAT
 VSWDSGGSD EAPPKPSRPGYPSRSEGFYPSQHMVQTNHYQVSGYPGSHGITAMAGSIYPGQASLLDQ
 TDSWNHRPQEIAMWQPNVEDSTVLDLRGIGQVLP THLMEERLIRQQQEEMEDQRWLEKEERFLKPDVRLS
 RGSIDREDGSLQGP IGNQHIYQPVGKPDPAAPPKPPRPGAPGHLGSLASLSSPADSYNEGVPWR LQPQ
 EISPPPTANLDRSNDKVYENVTLVKAVIEMSSKIQPAPPEEYVPMVKEVGLALRTL LATVDETIPLLP
 STHREIEMAQKLLNSDLGELINKMKLAQQYVMTSLQQEYKKQMLTAAHALAVDAKNLLDVIDQARLKMGLG
 QTRPH

TRTRPLE – GFP Tag – V

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_153831

ORF Size: 3165 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_153831.2](#), [NP_722560.1](#)

RefSeq Size: 4453 bp

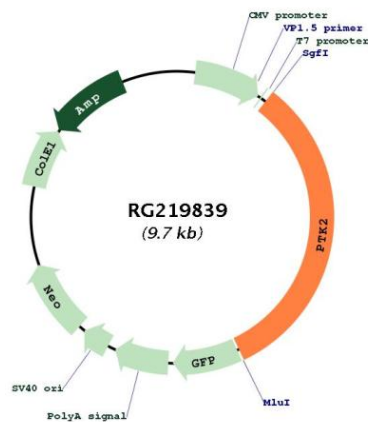
RefSeq ORF: 3159 bp

Locus ID: 5747

UniProt ID: [Q05397](#)
Cytogenetics: 8q24.3
Domains: B41, pkinase, TyrKc, S_TKc, Focal_AT
Protein Families: Druggable Genome, Protein Kinase
Protein Pathways: Axon guidance, Chemokine signaling pathway, ErbB signaling pathway, Focal adhesion, Leukocyte transendothelial migration, Pathways in cancer, Regulation of actin cytoskeleton, Small cell lung cancer, VEGF signaling pathway

Gene Summary: This gene encodes a cytoplasmic protein tyrosine kinase which is found concentrated in the focal adhesions that form between cells growing in the presence of extracellular matrix constituents. The encoded protein is a member of the FAK subfamily of protein tyrosine kinases but lacks significant sequence similarity to kinases from other subfamilies. Activation of this gene may be an important early step in cell growth and intracellular signal transduction pathways triggered in response to certain neural peptides or to cell interactions with the extracellular matrix. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jun 2017]

Product images:



Circular map for RG219839