

## Product datasheet for RC219839

### 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:	Myc-DDK
Symbol:	FAK
Synonyms:	FADK; FADK 1; FAK; FAK1; FRNK; p125FAK; pp125FAK; PPP1R71
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC219839 representing NM_153831 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCAGCTGCTTACCTTGACCCCAACTGAATCACACACCAAATTCGAGTACTAAGACTCACCTGGGTA  
CTGGTATGGAACGTTCTCCTGGTGAATGGAGCGAGTATTAAAGGTCTTTCATTATTTTGAAGCAATAG  
TGAGCCAACACCTGGGCCAGTATTATCAGGCATGGAGATGCTACTGATGCAGGGGCATCATTAGAAG  
ATAGTGGACAGTCACAAAGTAAAGCATGTGGCCTGCTATGGATTCGCCTCAGTCACCTGCGGTGAGG  
AGGTTCACTGGCTCACGTGGATATGGGCGTCTCCAGTGTGAGGGAGAAGTATGAGCTTGTCCACC  
AGAGGAGTGAAAATATGAATTGAGAATTCGTTATTTGCCAAAAGGATTTCTAAACCACTTACTGAAGT  
AAGCCAACCTTGAATTTCTTCTATCAACAGGTGAAGAGCGATTATATGTTAGAGATAGCTGATCAAGTGG  
ACCAGGAAATGCTTTGAAGTTGGGTTGTCTAGAAAACGCGCATCACTGGGAGATGCGGGGCAATGC  
ACTAGAAAAGAAGTCTAACTATGAAGTATTAGAAAAGATGTTGGTTTAAAGCGATTTTTTCTTAAGAGT  
TACTGGATTCTGTCAAGGCCAAAACACTAAGAAAAGTATGATCAACAAACATTTAGACAATTTGCCAACC  
TTAATAGAGAAGAAAGTATTCTGAAATCTTTGAGATCCTGTCTCCAGTCTACAGATTTGATAAAGGAATG  
CTTCAAGTGTGCTCTTGGTTCAAGCTGGATTATTTCAAGTGAAGTGGCAATCGGCCAGAAAGGAATC  
AGTTACCTAACGGACAAGGGCTGCAATCCACACATCTTGCTGACTTCACTCAAGTGCAAAACCTTCACT  
ATTCAAAACAGTGAAGACAAGGACAGAAAAGGAATGCTACAATAAAAATAGCAGGTGCACCCGAGCCTCT  
GACAGTGACGGCACCATCCCTAACCAATTGCGGAGAATATGGCTGACCTAATAGATGGGACTGCGGCTG  
GTGAATGGAACCTCGCAGTCATTTATCATCAGACCTCAGAAAAGAGTGAACGGGCTTTGCCATCAATAC  
CAAAGTTGGCCAACAGCGAAAAGCAAGGCATGCGGACACAGCCGCTCTGTGTGTCAGAAAACAGATGATTA  
TGCTGAGATTATAGATGAAGAAGATACTTACACCATGCCCTCAACCAGGGATTATGAGATCAAAGAGAA  
AGAATAGAAGTGGACGATGATTGGAGAAGGCCAATTTGGAGATGTACATCAAGGCATTTATATGAGTC  
CAGAGAATCCAGCTTTGGCGTTGCAATAAAACATGAAAACTGTACTTCGGACAGCGTGAGAGAGAA  
ATTTCTCAAGAAGCCTTAACAATGCGTCAGTTTGACCATCCTCATATTGTGAAGCTGATTGGAGTCATC



[View online »](#)

ACAGAGAATCCTGTCTGGATAATCATGGAGCTGTGCACACTTGGAGAGCTGAGGTCAATTTTTGCAAGTAA  
 GGAAATACAGTTTGGATCTAGCATCTTTGATCCTGTATGCCTATCAGCTTAGTACAGCTCTTGCATATCT  
 AGAGAGCAAAAGATTTGTACACAGGGACATTGCTGCTCGGAATGTTCTGGTGTCTCAAATGATTGTGA  
 AAATTAGGAGACTTTGGATTATCCCGATATATGGAAGATAGTACTTACTACAAAGCTTCAAAGGAAAAAT  
 TGCCTATTAATGGATGGCTCCAGAGTCAATCAATTTTCGACGTTTTACCTCAGCTAGTGACGTATGGAT  
 GTTTGGTGTGTATGTGGGAGATACTGATGCATGGTGTGAAGCCTTTTCAAGGAGTGAAGAACAATGAT  
 GTAATCGGTGCAATTGAAAATGGGAAAAGATTACCAATGCCTCCAAATGTCTCTACCTCTACAGCC  
 TTATGACGAAAATGCTGGGCCTATGACCCAGCAGGCGGCCAGGTTTACTGAACTTAAAGCTCAGCTCAG  
 CACAATCCTGGAGGAAGAGAAGGCTCAGCAAGAAGAGCGCATGAGGATGGAGTCCAGAAGACAGGCCACA  
 GTGTCCTGGGACTCCGGAGGGTCTGATGAAGCACCGCCAAGCCAGCAGACCGGTTATCCAGTCCGA  
 GGTCCAGCGAAGGATTTTATCCAGCCACAGCACATGGTACAAACCAATCATTACCAGGTTTCTGGCTA  
 CCCTGGTTCACATGGAATCACAGCCATGGCTGGCAGCATCTATCCAGGTGAGGCATCTCTTTGGACCAA  
 ACAGATTCATGGAATCATAGACCTCAGGAGATAGCAATGTGGCAGCCCAATGTGGAGGACTCTACAGTAT  
 TGGACCTGCGAGGGATTGGCAAGTGTGCCAACCCATCTGATGGAAGAGCGTCTAATCCGACAGCAACA  
 GAAAATGGAAGAAGATCAGCGCTGGCTGAAAAAGAGGAAAAGATTCTGAAACCTGATGTGAGACTCTCT  
 CGAGGCAGTATTGACAGGGAGGATGGAAGTCTCAGGGTCCGATTGGAACCAACATATATATCAGCCTG  
 TGGGTA AACAGATCCTGCAGCTCCACCAAGAAACCGCCTCGCCCTGGAGCTCCCGGTCTCTGGGAAG  
 CCTTGCCAGCCTCAGCAGCCCTGCTGACAGCTACAACGAGGGTGTCAAGCCATGGAGGCTTACAGCCAG  
 GAAATCAGCCCCCTCTACTGCCAACCTGGACCGGTGCAATGATAAGGTGTACGAGAATGTGACGGGCC  
 TGGTGAAGCTGTATCGAGATGTCCAGTAAAAATCCAGCCAGCCCCACCAGAGGAGTATGTCCCTATGGT  
 GAAGGAAGTCGGCTTGGCCCTGAGGACATTATTGGCCACTGTGGATGAGACCATTCCCCTCTACAGCC  
 AGCACCACCCAGAGATGAGATGGCACAGAAGCTATTGAACTCTGACCTGGGTGAGCTCATCAACAAGA  
 TGAACCTGGCCAGCAGTATGTCATGACCAGCCTCCAGCAAGAGTACAAAAAGCAATGCTGACTGCTGC  
 TCAGCCCTGGCTGTGGATGCCAAAACTTACTCGATGTATTGACCAAGCAAGACTGAAAATGCTTGGG  
 CAGACGAGACCACAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

&gt;RC219839 representing NM\_153831

Red=Cloning site Green=Tags(s)

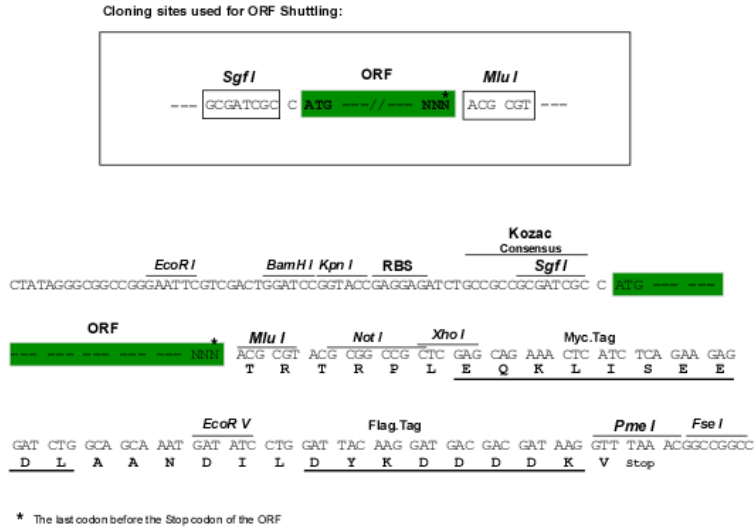
MAAAYLDPNLNHTPNSSTKTHLGTGMERSPGAMERVLKVFHYFESNSEPTTWASIIIRHGDATAVIRGIIQK  
 IVDSHKVHVACYGFRLSHLRSEEVHWHLVDMGVSSVREKYELAHPPEEWKYELRIRYLPKGFNLQFTED  
 KPTLNFFYQQVKS DYMLEIADQVDQEI ALKLGCL EIRRSYWEMRGNAL EKKSNYEVLEKDVGLKRFPPKS  
 LLDSVKAKTLRKL IQQTFRQFANLNREESILKFFEILSPVYRFDKECFKALGSSWII SVELAIGPEEGI  
 SYLTDKGCNPTHLADFTQVQTIQYSNSEDKDRKGMQLK IAGAPEPLTVTAPSLTIAENMADLIDGYCRL  
 VNGTSQSFIIRPQKEGERALPSIPKLANSEKQGMRTHAVSVSETDDYAEI IDEEDTYTMPSTRDYEIQRE  
 RIELGRICIGEGQFGDVHQGIYMSPENPALAVA IKTCKNCTSDSVREKFLQEAL TMRQFDHPHIVKLI GVI  
 TENPVWIMELCTLGELRSFLQVRKYSLDL ASLILYAYQLSTALAYLESKRFVHRDIAARNVLVSSNDCV  
 KLGDVFLSRYMEDSTYYKASKGKLP IKWMAPESINFRRFTSASDVWFMFGVCMWEILMHGKVPFQGVKNN  
 VIGRIENGERLPMPPNCPPTLYSLMTKWAYDPSRRPRFTELKAQLSTILEEEKAQQEERMRESRRQAT  
 VSWDSGGSD EAPPKPSRPGYSPRSSEGFYSPQHMVQTNHYQVSGYPGSHGITAMAGSIYPGQASLLDQ  
 TDSWNHRPQEIAMWQPNVEDSTVLDLRIGQVLP THLMEERLIRQQEMEEDQRWLEKEERFLKPDVRLS  
 RGSIDREDGSLQGP IGNQHIYQVGPDP AAPPKPPRPGAPGHLGSLASLSSPADSYNEGVPWRLQPPQ  
 EISPPPTANLDRSNDKVYENV TGLVKAVIEMSSKIQPAPPEEYVPMVKEVGLALRTL LATVDETIPLLPA  
 STHREIEMAQKLLNSDLGELINKMKLAQQYVMTSLQQEYKKQMLTAAHALAVDAKNLLDVIDQARLKMGLG  
 QTRPH

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**
[https://cdn.origene.com/chromatograms/mk6049\\_e10.zip](https://cdn.origene.com/chromatograms/mk6049_e10.zip)

**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\\_153831.4](#)

**RefSeq Size:** 4453 bp

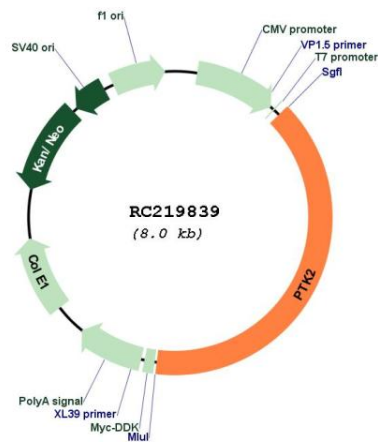
**RefSeq ORF:** 3159 bp

**Locus ID:** 5747

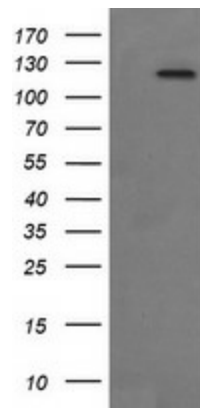
**UniProt ID:** [Q05397](#)

<b>Cytogenetics:</b>	8q24.3
<b>Domains:</b>	B41, pkinase, TyrKc, S_TKc, Focal_AT
<b>Protein Families:</b>	Druggable Genome, Protein Kinase
<b>Protein Pathways:</b>	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
<b>MW:</b>	119.1 kDa
<b>Gene Summary:</b>	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]

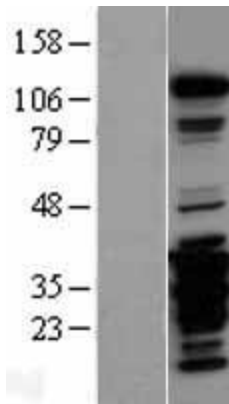
**Product images:**



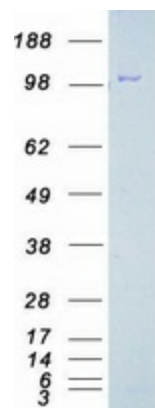
Circular map for RC219839



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PTK2 (Cat# RC219839, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PTK2 (Cat# [TA506161]). Positive lysates [LY403521] (100ug) and [LC403521] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY403521]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC219839 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PTK2 protein (Cat# [TP319839]). The protein was produced from HEK293T cells transfected with PTK2 cDNA clone (Cat# RC219839) using MegaTran 2.0 (Cat# [TT210002]).