OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for MC229389

Tek (NM_001290549) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Tek (NM_001290549) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Tek
Synonyms:	AA517024; Cd202b; Hyk; STK1; Tie-2; Tie2
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
Fully Sequenced ORF:	>MC229389 representing NM_001290549 Red=Cloning site Blue=ORF Orange=Stop codon TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGGACTCTTTAGCCGGCTTAGTTCTCTGTGGAGTCAGCTTGCTCCTTTATGGAGTAGTAGAAGGCGCCA TGGACCTGATCTTGATCAATTCCCTACCTCTTGTGTCTGATGCCGAAACATCCCTCACCTGCATTGCCTC TGGGTGGCACCCCCATGAGCCCATCACCATAGGAAGGGACTTTGAAGCCTTAATGAACCAGCACCAAGAT CCACTGGAGGTTACTCAAGATGTGACCAGAGAATGGGCGAAAAAAGTTGTTTGGAAGAGAGAAAAGGCCA GTAAGATTAATGGTGCTTATTTCTGTGAAGGTCGAGTTCGAGGACAGGCTATAAGGATACGGACCATGAA GATGCGTCAACAAGCATCCTTCCTACCTGCTACTTTAACTATGACCGTGGACAGGGGAGATAATGTGAAC ATATCTTTCAAAAAGGTGTTAATTAAAGAAGAAGATGCAGTGATTTACAAAAATGGCTCCTTCATCCACT CAGTGCCCCGGCATGAAGTACCTGATATTTTAGAAGTTCACTTGCCGCATGCTCAGCCCCAGGATGCTGG TGTGTACTCGGCCAGGTACATAGGAGGAAACCTGTTCACCTCAGCCTTCACCAGGCTGATTGTTCGGAGA TGTGAAGCTCAGAAGTGGGGGCCCGACTGTAGCCGTCCTTGTACTACTTGCAAGAACAATGGAGTCTGCC ATGAAGATACCGGGGAATGCATTTGCCCTCCTGGGTTTATGGGGAGAACATGTGAGAAAGCTTGTGAGCC GCACACATTTGGCAGGACCTGTAAAGAAAGGTGTAGTGGACCAGAAGGATGCAAGTCTTATGTGTTCTGT CTCCCAGACCCTTACGGGTGTTCCTGTGCCACAGGCTGGAGGGGGTTGCAGTGCAATGAAGCATGCCCAT CTGGTTACTACGGACCAGACTGTAAGCTCAGGTGCCACTGTACCAATGAAGAGATATGTGATCGGTTCCA AGGATGCCTCTGCTCTCAAGGATGGCAAGGGCTGCAGTGTGAGAAAGAAGGCAGGCCAAGGATGACTCCA CAGATAGAGGATTTGCCAGATCACATTGAAGTAAACAGTGGAAAATTTAACCCCATCTGCAAAGCCTCTG GGTGGCCACTACCTACTAGTGAAGAAATGACCCTAGTGAAGCCAGATGGGACAGTGCTCCAACCAAATGA CTTCAACTATACAGATCGTTTCTCAGTGGCCATATTCACTGTCAACCGAGTCTTACCTCCTGACTCAGGA GTCTGGGTCTGCAGTGTGAACACAGTGGCTGGGATGGTGGAAAAGCCTTTCAACATTTCCGTCAAAGTTC TTCCAGAGCCCCTGCACGCCCCAAATGTGATTGACACTGGACATAACTTTGCTATCATCAATATCAGCTC TGAGCCTTACTTTGGGGATGGACCCATCAAATCCAAGAAGCTTTTCTATAAACCTGTCAATCAGGCCTGG AAATACATTGAAGTGACGAATGAGATTTTCACTCTCAACTACTTGGAGCCGCGGACTGACTACGAGCTGT

View online »

GTGTGCAGCTGGCCCGTCCTGGAGAGGGTGGAGAAGGGCATCCTGGGCCTGTGAGACGATTTACAACAGC
GTCTATCGGACTCCCTCCTCCAAGAGGTCTCAGTCTCCTGCCAAAAAGCCAGACAGCTCTAAATTTGACT
TGGCAACCGATATTTACAAACTCAGAAGATGAATTTTATGTGGAAGTCGAGAGGCGATCCCTGCAAACAA
CAAGTGATCAGCAGAACATCAAAGTGCCTGGGAACCTGACCTCGGTGCTACTGAGCAACTTAGTCCCCAG
GGAGCAGTACACAGTCCGAGCTAGAGTCAACACCAAGGCGCAGGGGGAGTGGAGTGAAGAACTCAGGGCC
TGGACCCTTAGTGACATTCTCCCTCCTCAACCAGAAAACATCAAGATCTCCAACATCACTGACTCCACAG
CTATGGTTTCTTGGACAATAGTGGATGGCTATTCGATTTCTTCCATCATCATCCGGTATAAGGTTCAGGG
CAAAAATGAAGACCAGCACATTGATGTGAAGATCAAGAATGCTACCGTTACTCAGTACCAGCTCAAGGGC
CTAGAGCCAGAGACTACATACCATGTGGATATTTTTGCTGAGAACAACATAGGATCAAGCAACCCAGCCT
TTTCTCATGAACTGAGGACGCTTCCACATTCCCCAGCCTCTGCAGACCTCGGAGGGGGAAAGATGCTACT
CATAGCCATCCTTGGGTCGGCTGGAATGACTTGCATCACCGTGCTGTTGGCGTTTCTGATTATGTTGCAA
CTGAAGAGAGCAAATGTCCAAAGGAGAATGGCTCAGGCATTCCAGAACAGAGAAGAACCAGCTGTGCAGT
TTAACTCAGGAACTCTGGCCCTTAACAGGAAGGCCAAAAACAATCCGGATCCCACAATTTATCCTGTGCT
TGACTGGAATGACATCAAGTTTCAAGACGTGATCGGAGAGGGCAACTTTGGCCAGGTTCTGAAGGCACGC
ATCAAGAAGGATGGGTTACGGATGGATGCCGCCATCAAGAGGATGAAAGAGTATGCCTCCAAAGATGATC
ACAGGGACTTCGCAGGAGAACTGGAGGTTCTTTGTAAACTTGGACACCATCCAAACATCATTAATCTCTT
GGGAGCATGTGAACACCGAGGCTATTTGTACCTAGCTATTGAGTATGCCCCGCATGGAAACCTCCTGGAC
TTCCTGCGTAAGAGCAGAGTGCTAGAGACAGACCCTGCTTTTGCCATCGCCAACAGTACAGCTTCCACAC
TGTCCTCCCAACAGCTTCTTCATTTTGCTGCAGATGTGGCCCGGGGGATGGACTACTTGAGCCAGAAACA
GTTTATCCACAGGGACCTGGCTGCCAGAAACATTTTAGTTGGTGAAAACTACATAGCCAAAATAGCAGAT
TTTGGATTGTCACGAGGTCAAGAAGTGTATGTGAAAAAGACAATGGGAAGGCTCCCAGTGCGTTGGATGG
CAATCGAATCACTGAACTATAGTGTCTATACAACCAACAGTGATGTCTGGTCCTATGGTGTATTGCTCTG
GGAGATTGTTAGCTTAGGAGGCACCCCCTACTGCGGCATGACGTGCGCGGAGCTCTATGAGAAGCTACCC
CAGGGCTACAGGCTGGAGAAGCCCCTGAACTGTGATGATGAGGTGTATGATCTAATGAGACAGTGCTGGA
GGGAGAAGCCTTATGAGAGACCATCATTTGCCCAGATATTGGTGTCCTTAAACAGGATGCTGGAAGAACG
GAAGACATACGTGAACACCACACTGTATGAGAAGTTTACCTATGCAGGAATTGACTGCTCTGCGGAAGAA
GCAGCCTAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_001290549

Insert Size: 3369 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

OTI Annotation: Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.

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_001290549.1, NP_001277478.1

RefSeq Size: 4699 bp

RefSeq ORF: 3369 bp

Locus ID: 21687

UniProt ID: Q02858

Cytogenetics: 4 43.34 cM

Gene Summary: Tyrosine-protein kinase that acts as cell-surface receptor for ANGPT1, ANGPT2 and ANGPT4 and regulates angiogenesis, endothelial cell survival, proliferation, migration, adhesion and cell spreading, reorganization of the actin cytoskeleton, but also maintenance of vascular quiescence. Has anti-inflammatory effects by preventing the leakage of proinflammatory plasma proteins and leukocytes from blood vessels. Required for normal angiogenesis and heart development during embryogenesis. Required for post-natal hematopoiesis. After birth, activates or inhibits angiogenesis, depending on the context. Inhibits angiogenesis and promotes vascular stability in quiescent vessels, where endothelial cells have tight contacts. In quiescent vessels, ANGPT1 oligomers recruit TEK to cell-cell contacts, forming complexes with TEK molecules from adjoining cells, and this leads to preferential activation of phosphatidylinositol 3-kinase and the AKT1 signaling cascades. In migrating endothelial cells that lack cell-cell adhesions, ANGT1 recruits TEK to contacts with the extracellular matrix, leading to the formation of focal adhesion complexes, activation of PTK2/FAK and of the downstream kinases MAPK1/ERK2 and MAPK3/ERK1, and ultimately to the stimulation of sprouting angiogenesis. ANGPT1 signaling triggers receptor dimerization and autophosphorylation at specific tyrosine residues that then serve as binding sites for scaffold proteins and effectors. Signaling is modulated by ANGPT2 that has lower affinity for TEK, can promote TEK autophosphorylation in the absence of ANGPT1, but inhibits ANGPT1-mediated signaling by competing for the same binding site. Signaling is also modulated by formation of heterodimers with TIE1, and by proteolytic processing that gives rise to a soluble TEK extracellular domain. The soluble extracellular domain modulates signaling by functioning as decoy receptor for angiopoietins. TEK phosphorylates DOK2, GRB7, GRB14, PIK3R1, SHC1 and TIE1.[UniProtKB/Swiss-Prot Function]
Transcript Variant: This variant (2) uses an alternate in-frame splice site in the 3' coding region, compared to variant 1. It encodes isoform 2, which is shorter by an amino acid, compared to isoform 1. Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.