

Product datasheet for **MR230389**

Tec (NM_013689) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Tec (NM_013689) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Tec
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>MR230389 representing NM_013689
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGATGGTGTTCATCCCTGTCAAATAAATTTCCATTCCAGTCCACAAAGCAGGGACCGATGGGTGAAGA
 AGTAAAAAGAAGAAATAAAGAACAACAATAATATCATGATTAAATACCATCCTAAATTTCTGGGCAGATGG
 GAGTTACCAGTGTGTAGACAAACAGAAAACTAGCACCCGGATGTGAGAAGTACAATCTTTTTGAGAGT
 AGTATAAGAAAGACCCTGCCTCCCGCGCCAGAAATAAAGAAGAGAAGGCCTCTCCACCAATTTCCCCAG
 AGGAAGAAAATACTGAAGAAATCGTTGTAGCGATGTATGACTTCCAAGCGACGGAAGCACATGACCTCAG
 GTTAGAGAGAGGCCAAGAGTATATCATCTGGAAAAGAATGACCTCCATTGGTGGAGAGCGAGAGATAAG
 TATGGGTGGTACTGCAGAAATACCAACAGAAGCAAAGCAGAACAGCTCCTCAGAACGGAAGATAAAGAAG
 GTGGTTTTATGGTGGAGACTCCAGTCAACCAGGCTTGTACACTGTCTCCCTTTACACAAAGTTTGGGGG
 AGAAGGCTCATCAGGTTTCAGGCATTATCACATAAAGGAAACAGCAACATCCCCAAAGAAGTATTACCTG
 GCAGAGAAGCATGCTTTTCGGGTCCATTCCTGAGATCATTGAATATCACAAGCACAATGCGGCAGGGCTTG
 TACCAGGCTGCGGTACCCGGTCACTACAAGGGGAAGAAGCTCCCACTACTGCCGGCTTCAGCTATGA
 TAAGTGGGAGATTAACCCATCAGAGCTGACCTTTATGAGAGAGTTGGGGAGCGGACTGTTTGGAGTGGT
 AGGCTTGGCAAGTGGCGGCCAGTACAAAGTGGCCATCAAAGCTATCCGGGAAGCGCCATGTGTGAAG
 AGGATTTATAGAGGAAGCTAAAGTATGATGAAGCTGACACACCCCAAGCTGGTACAGCTCTATGGTGT
 ATGACCCAGCAGAAGCCATCTACATCGTTACCGAGTTCATGGAACGGGGCTGCCTTCTGAATTTCTC
 CGGCAGAGACAAGGCCATTTACGAGAGACATGCTGCTAAGCATGTGTCAAGATGTCTGTGAAGGGATGG
 AGTACTGGAGAGAAAACAGCTTCCACAGAGACCTGGCTGCCAGAAATTGTCTAGTGAATGAAGCAGG
 AGTTGTCAAAGTATCTGATTTTGAATTGGCCAGGTACGTTCTGGATGATCAGTACACAAGTTCTTCTGGC
 GCCAAGTTCCTGTGAAGTGGTGTCCCCAGAAGTGTAAATTACAGCCGCTTAGCAGCAAGTCAGACG
 TCTGGTCGTTTGGTGTGCTAATGTGGGAAATATTCACAGAAGGCAGGATGCCCTTTGAGAAGAACACCAA
 TTACGAAGTGGTAACCATGGTACTCGTGGCCACCGCCTCCACCGGCCAAAGCTGGCTTCCAAATATTTG
 TATGAGGTGATGCTGAGATGCTGGCAAGAGAGACCAGAGGGAAGGCCTTCCTTTGAAGACTTGTGCGTA
 CGATAGATGAAGTGTGAAGAACTTTTGAAGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR230389 representing NM_013689
 Red=Cloning site Green=Tags(s)

MMVSFPVKINFHSSPQSRDRWVKLKEEIKNNNNIMIKYHPKFWADGSYQCCRQTEKLAPGCEKYNLFES
 SIRKTLPPAPEIKRRPPPIPEEENTEEIVVAMYDFQATEAHDRLRLERGQEYIILEKNDLHWRARDK
 YGWYCRNTNRSKAEQLLRTEDKEGGFMVRDSSQPLTYVSLYTKFGGEGSSGFRHYHIKETATSPKKYYL
 AEKHAFGSIPEIIEYHKHNAAGLVTRLRYPVSTKGNAPTTAGFSYDKWEINPSELTFMRELGSGLFVGV
 RLGKWRAQYKVAIKAIREGAMCEEDFIEEAKVMMKLTHPKLVQLYGVCTQQKPIYIVTEFMERGLLNF
 RQRQGHFSRDMLLSMCQDVCEGMEYLERNSFIHRDLAARNCLVNEAGVVKVSDFGMARYVLDDQYSSSG
 AKFPVKWCPPEVFNYSRFSKSDVWSFGVLMWEIFTEGRMPFEKNTNYEVVMTMTRGHRLHRPKLASKYL
 YEVMRLRCWQERPEGRPSFEDLLRTIDELVECEETFGF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

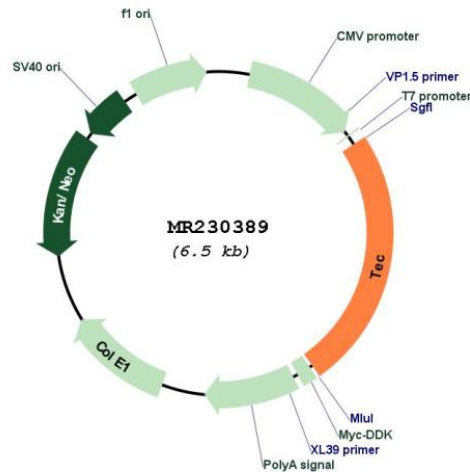
Cloning Scheme:

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_013689

ORF Size: 1581 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_013689.5](#), [NP_038717.2](#)

RefSeq Size: 2554 bp

RefSeq ORF: 1584 bp

Locus ID: 21682

Cytogenetics: 5 38.44 cM

MW: 62 kDa

Gene Summary: Non-receptor tyrosine kinase that contributes to signaling from many receptors and participates as a signal transducer in multiple downstream pathways, including regulation of the actin cytoskeleton. Plays a redundant role to ITK in regulation of the adaptive immune response. Regulates the development, function and differentiation of conventional T-cells and nonconventional NKT-cells. Required for TCR-dependent IL2 gene induction. Phosphorylates DOK1, one CD28-specific substrate, and contributes to CD28-signaling. Mediates signals that negatively regulate IL2RA expression induced by TCR cross-linking. Plays a redundant role to BTK in BCR-signaling for B-cell development and activation, especially by phosphorylating STAP1, a BCR-signaling protein. Required in mast cells for efficient cytokine production. Involved in both growth and differentiation mechanisms of myeloid cells through activation by the granulocyte colony-stimulating factor CSF3, a critical cytokine to promoting the growth, differentiation, and functional activation of myeloid cells. Participates in platelet signaling downstream of integrin activation. Cooperates with JAK2 through reciprocal phosphorylation to mediate cytokine-driven activation of FOS transcription. GRB10, a negative modifier of the FOS activation pathway, is another substrate of TEC. TEC is involved in G protein-coupled receptor- and integrin-mediated signalings in blood platelets. Plays a role in hepatocyte proliferation and liver regeneration and is involved in HGF-induced ERK signaling pathway. TEC regulates also FGF2 unconventional secretion (endoplasmic reticulum (ER)/Golgi-independent mechanism) under various physiological conditions through phosphorylation of FGF2 'Tyr-82'. May also be involved in the regulation of osteoclast differentiation. [UniProtKB/Swiss-Prot Function]