

Product datasheet for **MC219702**

Itk (NM_010583) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Itk (NM_010583) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Itk
Synonyms:	Emt; Tcsk; Tsk
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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Fully Sequenced ORF: >MC219702 representing NM_010583
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAACAACCTTCATCCTCCTGGAAGAACAGCTGATCAAGAAGTCCCAACAGAAGAGAAGGACTTCTCCCT
 CGAATTTTAAAGTTCGTTTCTTTGTCTTAACGAAAGCCAGCCTGGCCTACTTTGAGGACCGCCACGGGAA
 GAAGCGCACGTTGAAGGGCTCCATTGAACTCTCCAGAATCAAGTGTGTGGAGATTGTCAAGAGTGACATT
 AGCATCCCGTGCCACTATAAATACCCTTTTCAGGTCGTGCATGACAACATCTCCTGTATGTGTTTGCTC
 CAGACTGTGAGAGTCGGCAGCGCTGGGTGCTGACCCTTAAAGAAGAAACGAGGAATAACAACAGCCTGGT
 ATCCAAGTATCACCTAATTTCTGGATGGATGGCGGTGGAGGTGCTGCTCCAGCTGGAGAAGCCTGCT
 GTAGGCTGTGCTCCCTACGACCCATCCAAGAATGCTTCAAAGAAGCCTCTTCTCCTACTCCTGAAGACA
 ACAGGCGGTCAATTCAGGAACCTGAAGAAACCCTGGTCATTGCCTGTACGACTACCAAACCAACGACCC
 TCAGGAGCTCGCACTGCGGTGTGATGAAGAGTACTACCTGCTGGACAGCTCCGAGATCCACTGGTGGAGG
 GTTCAAGACAAAAATGGGCATGAAGGATATGCACCAAGCAGTTACCTGGTAGAAAAATCTCCAAATAACC
 TTGAAACCTATGAGTGGTACAATAAAAGCATCAGCCGCGCAAAAGCTGAAAAACTCTTTTGGACACAGG
 TAAAGAAGGAGCTTTCATGGTCCGAGATTCAGGACACCCGGGACATACACAGTCTCTGTTTTACCAAG
 GCCATCATAAGTGAGAACCCTGTATAAAACATTATCACATCAAAGAAACAAATGACAGCCCCAAGCGCT
 ACTACGTGGTGAGAAGTATGTGTTGACTCCATCCCTCTCCTCATCCAGTATCACCAGTACAATGGAGG
 AGGTTTGGTCACTCGACTCCGCTATCCAGTTTGTCTCTGGAGACAAAAAGCCCTGTCACAGCAGGGCTA
 AGATATGGGAAGTGGGTGATCCAACCCTCAGAGCTAACGTTTCGTGCAGGAGATTGGCAGCGGGCAGTTT
 GGCTGGTGCATCTCGGCTACTGGCTCAACAAGGACAAGTGGCCATCAAGACCATTGAGGAAGGGGCGAT
 GTCAGAAGAAGACTTTATCGAGGAGGCGGAAGTCATGATGAAACTCTCTACCCCAAACCTGGTGCAGCTC
 TATGGGTGTGCCTGGAGCAAGCCCCATCTGCCTGGTGTGTTGAGTTCATGGAGCACGGCTGCCTGTGCG
 ATTACCTTCAAGTCAGCGGGTCTCTTTGCTGCGGAGACCCTGCTGGGCATGTGCCTGGATGTGTGTGA
 GGGCATGGCCTACCTGAAAAAGCTTGTGTATCCACAGAGACCTGGCAGCCAGAAACTGTTTGGTGGGA
 GAAAACAGGTCAAGGTGTCCGACTTTGGGATGACAAGATTTGCTTGTATGATCAATATACCAGCT
 CCACGGGCACCAAATCCAGTGAAGTGGGCATCCCCAGAGGTGTTCTCCTTTAGTCGTATAGCAGCAA
 GTCAGATGTGTGGTCGTTTGGTGTACTGATGTGGGAAGTCTTCAGTGAAGGCAAAATCCCATACGAAAAC
 CGAAGCAATTCGAGGTGTTGGAAGATATCAGCACTGGCTTTCGTTTATACAAGCCCCGCTGGCCTCCT
 GCATGTCTACCAGATCATGAATCATTGCTGGAAGAGAAAACAGAAGACCGGCCACCCTTCTCCAGCT
 GTTAAGCCAGCTGGCTGAAATCGCAGAAGCTGGGCTT**TAG**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_010583

Insert Size: 1860 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).

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_010583.3](#), [NP_034713.2](#)

RefSeq Size: 4274 bp

RefSeq ORF: 1860 bp

Locus ID: 16428

UniProt ID: [Q03526](#)

Cytogenetics: 11 27.75 cM

Gene Summary: Tyrosine kinase that plays an essential role in regulation of the adaptive immune response. Regulates the development, function and differentiation of conventional T-cells and nonconventional NKT-cells. When antigen presenting cells (APC) activate T-cell receptor (TCR), a series of phosphorylation lead to the recruitment of ITK to the cell membrane, in the vicinity of the stimulated TCR receptor, where it is phosphorylated by LCK. Phosphorylation leads to ITK autophosphorylation and full activation. Once activated, phosphorylates PLCG1, leading to the activation of this lipase and subsequent cleavage of its substrates. In turn, the endoplasmic reticulum releases calcium in the cytoplasm and the nuclear activator of activated T-cells (NFAT) translocates into the nucleus to perform its transcriptional duty. Phosphorylates 2 essential adapter proteins: the linker for activation of T-cells/LAT protein and LCP2. Then, a large number of signaling molecules such as VAV1 are recruited and ultimately lead to lymphokine production, T-cell proliferation and differentiation. Phosphorylates TBX21 at 'Tyr-525' and mediates its interaction with GATA3 (PubMed:15662016).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) uses an alternate in-frame splice site in the central coding region, compared to variant 1. The encoded isoform (2) is shorter, compared to isoform 1.