

Product datasheet for **MR230715**

Itk (NM_001281966) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Itk (NM_001281966) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Itk
Synonyms:	Emt; Tcsk; Tsk
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>MR230715 representing NM_001281966
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAACAACCTTCATCCTCCTGGAAGAACAGCTGATCAAGAAGTCCCAACAGAAGAGAAGGACTTCTCCCT
 CGAATTTTAAAGTTCGTTTCTTTGTCTTAACGAAAGCCAGCCTGGCCTACTTTGAGGACCGCCACGGGAA
 GAAGCGCACGTTGAAGGGCTCCATTGAACTCTCCAGAATCAAGTGTGTGGAGATTGTCAAGAGTGACATT
 AGCATCCCGTGCCACTATAAATACCCTTTTCAGGTCGTGCATGACAACTATCTCCTGTATGTGTTTGCTC
 CAGACTGTGAGAGTCGGCAGCGCTGGGTGCTGACCCTTAAAGAAGAAACGAGGAATAACAACAGCCTGGT
 ATCCAAGTATCACCTAATTTCTGGATGGATGGCGGTGGAGGTGCTGCTCCAGCTGGAGAAGCCTGCT
 GTAGGCTGTGCTCCCTACGACCCATCCAAGAATGCTTCAAAGAAGCCTCTCCTCCTACTCCTGAAGACA
 ACAGGGTAAGTGAGCGGTCAATTCAGGAACCTGAAGAAACCTGGTCATTGCCTTGTACGACTACCAAC
 CAACGACCCTCAGGAGCTCGACTGCGGTGTGATGAAGAGTACTACCTGCTGGACAGCTCCGAGATCCAC
 TGGTGGAGGGTTCAAGACAAAAATGGGCATGAAGGATATGCACCAAGCAGTTACCTGGTAGAAAAATCTC
 CAAATAACCTTGAACCTATGAGTGGTACAATAAAAGCATCAGCCGCGACAAAGCTGAAAAAATTCTTTT
 GGACACAGGTAAGAAGGAGCTTTCATGGTCCGAGATCCAGGACACCCGGGACATACACAGTCTCTGTT
 TTCACCAAGGCCATCATAAGTGAGAACCCTGTATAAAACATTATCACATCAAAGAAACAAATGACAGCC
 CCAAGCGTACTACGTGGCTGAGAAGTATGTGTTTGACTCCATCCCTCTCCTCATCCAGTATCACCAGTA
 CAATGGAGGAGGTTTGGTCACTCGACTCCGCTATCCAGTTTGCTCCTGGAGACAAAAAGCCCTGTCA
 GCAGGGTAAGATATGGGAAGTGGGTGATCCAACCCCTCAGAGTAAAGTTCGTCGAGGAGATTGGCAGCG
 GGCAGTTTGGGCTGGTGCATCTCGGCTACTGGCTCAACAAGGACAAGGTGGCCATCAAGACCATTAGCA
 AGGGCGCATGTCAGAAGAAGACTTTATCGAGGAGCGGAAGTCATGATGAAACTCTCTCACCCCAAACCTG
 GTGCAGCTCTATGGGTTGCTGCTGGAGCAAGCCCCATCTGCCTGGTGTGTTGAGTTCATGGAGCAGCGCT
 GCCTGTGGATTACCTTGAAGTCAGCGGGTCTCTTTGCTGCGGAGACCCTGCTGGGCATGTGCCTGGA
 TGTGTGTGAGGGCATGGCCTACCTGAAAAAGCTTGTGTCATCCACAGAGACCTGGCAGCCAGAACTGT
 TTGGTGGGAGAAAACCAGGTATCAAGGTGTCCGACTTTGGGATGACAAGATTTGCTTGTATGATCAAT
 ATACCAGTCCACGGCACCAAATTCAGTGAAGTGGGCATCCACAGAGGTGTTCTCCTTTAGTCGCTA
 TAGCAGCAAGTCAGATGTGTGGTGTGTTGGTACTGATGTGGGAAGTCTTCAGTGAAGGCAAAATCCCA
 TACGAAAACCGAAGCAATTCGAGTCTGGAAGATATCAGCACTGGCTTTCGGTTATACAAGCCCCGCC
 TGGCCTCCTGTCATGTCTACCAGATCATGAATCATTGCTGGAAAGAGAAACCAGAAGACCGCCACCCCT
 CTCCAGCTGTTAAGCCAGCTGGCTGAAATCGCAGAAGCTGGGCTT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

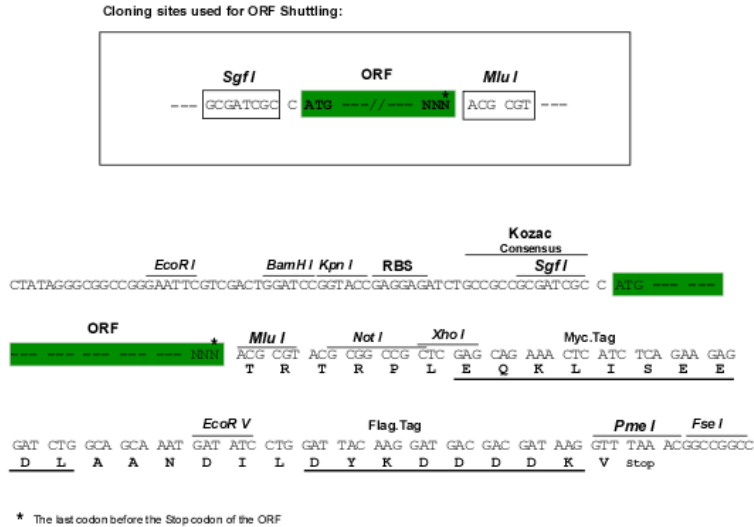
>MR230715 representing NM_001281966
 Red=Cloning site Green=Tags(s)

MNFIILLEEQLIKKSQQRRTSPSNFKVRFFVLTKASLAYFEDRHGKKRTLKGSIELSRIKCVIEIVKSDI
 SIPCHYKYPFQVVDNYLLVYFAPDCESRQRWVLTKEETRNNNSLVSKYHPNFWMGRWRCCSQLEKPA
 VGCAPYDPSKNASKKPLPPTPEDNRVSERSFQEPEETLVIALYDYQTNDPQELALRCDEEYLLDSSEIH
 WWRVQDKNGHEGYAPSSYLVEKSPNLETYEWYNKISIRDKAELLLDGTGKEGAFMVRDSRTPGTYTVSV
 FTKAIISENPCIKHYHIKETNDSPKRYVAEKYVFDSEIPLLIQYHQYNGGGLVTRLRYPVCSWRQKAPVT
 AGLRYGKWIQPSLTFVQEIIGSQFGLVHLGYWLNKDKVAIKTIQEGAMSEEDFIEEAEVMMKLSHPKL
 VQLYGVCLQAPICLVFEFMEHGCLSDYLRSQRGLFAAETLLGMCLDVCEGMAYLEKACVIHRDLAARNC
 LVGENQVIKVSDFGMTRFVLDQYTSSTGTFKFPVKWASPEVFSFSRYSSKSDVWSFGVLMWEVSEGGIP
 YENRSNSEVVEDISTGFRLYKPRLASCHVYQIMNHCWKEKPEDRPPFSQLLSQLAEIAEAGL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001281966

ORF Size: 1866 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_001281966.1](#), [NP_001268895.1](#)

RefSeq Size: 4283 bp

RefSeq ORF: 1869 bp

Locus ID: 16428

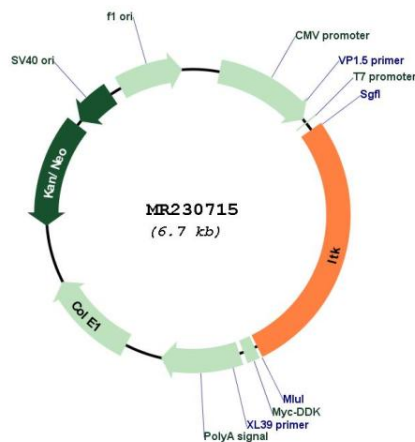
UniProt ID: [Q03526](#)

Cytogenetics: 11 27.75 cM

MW: 72.3 kDa

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]

Product images:



Circular map for MR230715