

## Product datasheet for TP527110

### Itk (NM\_010583) Mouse Recombinant Protein

#### Product data:

<b>Product Type:</b>	Recombinant Proteins
<b>Description:</b>	Purified recombinant protein of Mouse IL2 inducible T cell kinase (Itk), with C-terminal MYC/DDK tag, expressed in HEK293T cells, 20ug
<b>Species:</b>	Mouse
<b>Expression Host:</b>	HEK293T
<b>Expression cDNA Clone or AA Sequence:</b>	>MR227110 representing NM_010583 <b>Red</b> =Cloning site <b>Green</b> =Tags(s)

MNNFILLEEQLIKKSQQKRRTSPSNFKVRFVLTAKSLAYFEDRHGKKRTLKGSIELSRIKCVEIVKSDI  
SIPCHYKYPFQVVDNYLLYVFAPDCESRQRWVLTKEETRNNSLVSKYHPNFWMDGRWRCCSQLEKPA  
VGCAPYDPSKNASKKPLPPTPEDNRRSFQEPEETLVIALYDYQTNDPQELALRCDEEYLLDSSEIHWWR  
VQDKNGHEGYAPSSYLVEKSPNNLETYEWYNKSISRDKAEKLLDGTGKEGAFMVRDSRTPGTYTYSVFTK  
AIISENPCIKHYHIKETNDSPKRYVAEKYVFDIPLLIQYHQYNGGGLVTRLRYPVCSWRQKAPVTAGL  
RYGKWWIQPSELTFVQEIGSGQFGLVHLGYWLNKDKVAIKTIQEGAMSEEDFIEAEVMMKLSHPKLVQL  
YGVACLEQAPICLVFEFMEHGCLSDYLRSQRGLFAAETLLGMCLDVCEGMAYLEKACVIHRDLAARNCLVG  
ENQVIKVSDFGMTRFVLDLDDQYTSSTGTFKFPVKWASPEVFSFRYSSKSDVWSFGVLMWEVVFSEGKIPYEN  
RSNSEVVEDISTGFRLYKPRLASCHVYQIMNHCWKEKPEDRPPFSQLLSQLAEIAEAGL

**TRTRPLEQKLISEEDLAANDILDYKDDDDKV**

<b>Tag:</b>	C-MYC/DDK
<b>Predicted MW:</b>	72 kDa
<b>Concentration:</b>	>0.05 µg/µL as determined by microplate BCA method
<b>Purity:</b>	> 80% as determined by SDS-PAGE and Coomassie blue staining
<b>Buffer:</b>	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
<b>Note:</b>	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
<b>Storage:</b>	Store at -80°C after receiving vials.
<b>Stability:</b>	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.



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RefSeq:	<a href="#">NP_034713</a>
Locus ID:	16428
UniProt ID:	<a href="#">Q03526</a> , <a href="#">Q5STT8</a> , <a href="#">Q3U5G1</a>
RefSeq Size:	4284
Cytogenetics:	11 27.75 cM
RefSeq ORF:	1857
Synonyms:	Emt; Tcsk; Tsk

**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]