

Recombinant Human ITK Protein (M1-L620), Tag Free

Cat. No. ITK-1311H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human ITK(M1-L620 end) Protein was expressed in Insect cell.
Species	Human
Source	Insect Cells
ProteinLength	M1-L620
Description	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. Required for TCR-mediated calcium response in gamma-delta T-cells, may also be involved in the modulation of the transcriptomic signature in the Vgamma2-positive subset of immature gamma-delta T-cells. Phosphorylates TBX21

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

at 'Tyr-530' and mediates its interaction with GATA3.

Form	Liquid
Endotoxin	< 0.01 EU per µg of the protein
Purity	90%
Stability	Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade.
Storage	Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Storage Buffer	Supplied as sterile 50 mM Tris-HCl (pH7.5), 200 mM NaCl, 20% glycerol
Shipping	It is shipped out with blue ice.

GENE INFORMATION

Gene Name	ITK IL2-inducible T-cell kinase [Homo sapiens (human)]
Official Symbol	ITK
Synonyms	ITK; IL2-inducible T-cell kinase; tyrosine-protein kinase ITK/TSK; EMT; LYK; PSCTK2; kinase EMT; T-cell-specific kinase; tyrosine-protein kinase LYK; IL-2-inducible T cell kinase; IL-2-inducible T-cell kinase; homolog of mouse T-cell itk/tsk; interleukin-2-inducible T cell kinase; interleukin-2-inducible T-cell kinase; MGC126257; MGC126258;
Gene ID	3702

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mRNA Refseq	NM_005546
Protein Refseq	NP_005537
MIM	186973
UniProt ID	Q08881

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