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Mouse Itk Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13916a

Specification

Mouse Itk Antibody (N-term) - Product Information

Application	**WB,E**
Primary Accession	Q03526
Other Accession	Q08881, NP_034713.2
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**72292**
Antigen Region	**24-53**

Mouse Itk Antibody (N-term) - Additional Information

Gene ID 16428

Other Names
Tyrosine-protein kinase ITK/TSK, IL-2-inducible T-cell kinase, Kinase EMT, Kinase TLK, T-cell-specific kinase, Itk, Emt, Tlk, Tsk

Target/Specificity
This Mouse Itk antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 24-53 amino acids from the N-terminal region of mouse Itk.

Dilution
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Mouse Itk Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Mouse Itk Antibody (N-term) - Protein Information

Name Itk

Synonyms Emt, Tlk, Tsk

Function 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 (PubMed:23562159). Phosphorylates TBX21 at 'Tyr-525' and mediates its interaction with GATA3 (PubMed:15662016).

Cellular Location
Cytoplasm. Nucleus. Note=Localizes in the vicinity of cell surface receptors in the plasma membrane after receptor stimulation.

Tissue Location
Is detected in the thymus, lymph node and very faintly in the spleen, but is not detected in the liver, lung, kidney, heart, brain, intestine or testis. Expressed in T-lymphocytes and mast cells. It may also be expressed in natural killer cells

Mouse Itk Antibody (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Mouse Itk Antibody (N-term) - Images

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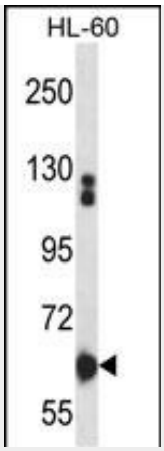
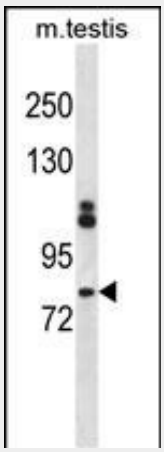


Mouse Itk Antibody (N-term) (Cat. #AP13916a) western blot analysis in HL-60 cell line lysates (35ug/lane).This demonstrates the Itk antibody detected the Itk protein (arrow).



Mouse Itk Antibody (N-term) (Cat. #AP13916a) western blot analysis in mouse testis tissue lysates (35ug/lane).This demonstrates the Itk antibody detected the Itk protein (arrow).

Mouse Itk Antibody (N-term) - Background

Itk may play a role in T-cell development, potentially in thymic selection.

Mouse Itk Antibody (N-term) - References

Joseph, R.E., et al. J. Mol. Biol. 403(2):231-242(2010)
Dierks, C., et al. Cancer Res. 70(15):6193-6204(2010)
Grasis, J.A., et al. Mol. Cell. Biol. 30(14):3596-3609(2010)
Xia, M., et al. J. Immunol. 184(12):6807-6814(2010)
Sahu, N., et al. PLoS ONE 5 (6), E11348 (2010) :