

**Mouse Itk Antibody (N-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP20745a****Specification**

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**Mouse Itk Antibody (N-term) - Product Information**

Application	WB,E
Primary Accession	<a href="#">Q03526</a>
Other Accession	<a href="#">Q08881</a>
Reactivity	Mouse
Predicted	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	72292
Antigen Region	156-190

**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 a rabbit immunized with a KLH conjugated synthetic peptide between 156-190 amino acids from the N-terminal region of human Mouse Itk.

**Dilution**

WB~~1:1000

**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.

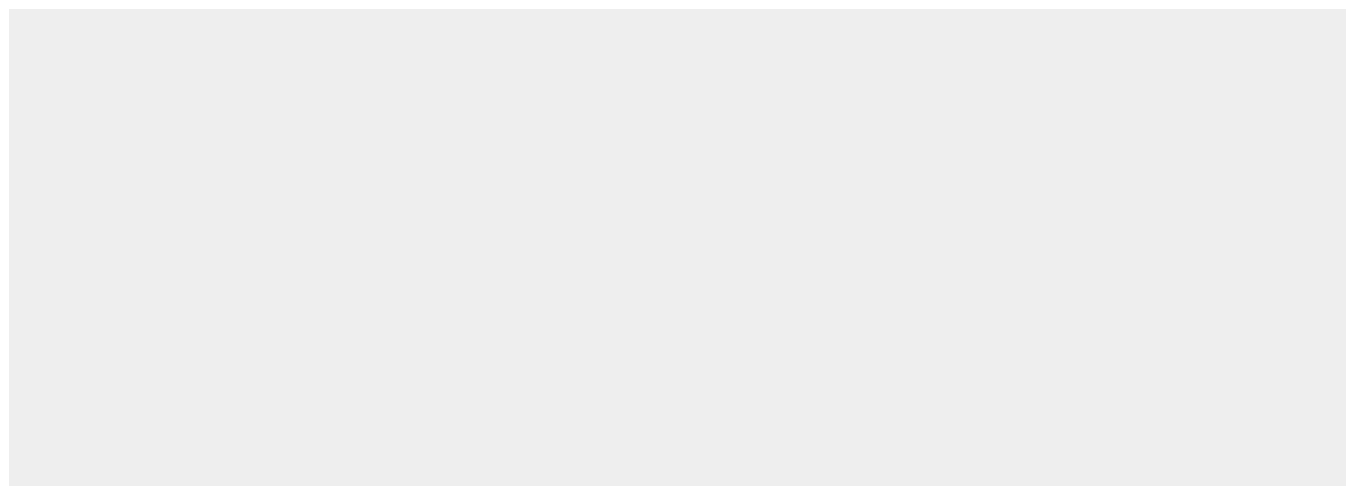
**Tissue Location**

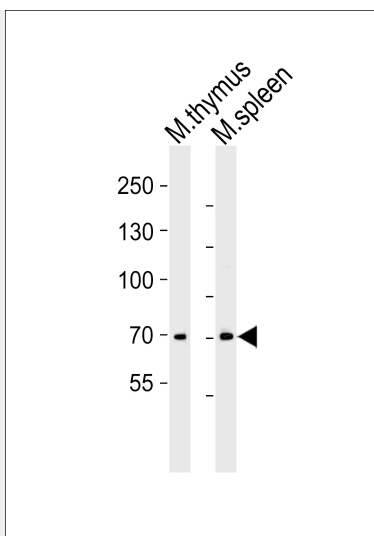
Is detected in the thymus, lymph node and very faintly in the spleen, but is not detected in the liver, lung, kidney, heart, brain, intestine or testis. Expressed in T-lymphocytes and mast cells. It may also be expressed in natural killer cells

**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 Cytometry](#)
- [Cell Culture](#)

**Mouse Itk Antibody (N-term) - Images**



Western blot analysis of lysates from mouse thymus and mouse spleen tissue lysate (from left to right), using Mouse Itk Antibody (N-term)(Cat. #AP20745a). AP20745a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysates at 35ug per lane.

#### Mouse Itk Antibody (N-term) - Background

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.

#### Mouse Itk Antibody (N-term) - References

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- Heyeck S.D.,et al.Proc. Natl. Acad. Sci. U.S.A. 90:669-673(1993).
- Yamada N.,et al.Biochem. Biophys. Res. Commun. 192:231-240(1993).
- Ogata M.,et al.Submitted (JAN-1993) to the EMBL/GenBank/DDBJ databases.
- Liao X.C.,et al.Immunity 3:757-769(1995).