

**ITK Antibody (Center)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP20969a**

### Specification

#### ITK Antibody (Center) - Product Information

Application	WB,E
Primary Accession	<a href="#">Q08881</a>
Other Accession	<a href="#">Q03526</a>
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	71831

#### ITK Antibody (Center) - Additional Information

##### Gene ID 3702

##### Other Names

Tyrosine-protein kinase ITK/TSK, Interleukin-2-inducible T-cell kinase, IL-2-inducible T-cell kinase, Kinase EMT, T-cell-specific kinase, Tyrosine-protein kinase Lyk, ITK, EMT, LYK

##### Target/Specificity

This ITK antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 228-262 amino acids from the Central region of human 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

ITK Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

#### ITK Antibody (Center) - Protein Information

##### Name ITK

**Synonyms** EMT, LYK

**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 (PubMed:[12186560](#), PubMed:[12682224](#), PubMed:[21725281](#)). 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 (By similarity). Phosphorylates TBX21 at 'Tyr-530' and mediates its interaction with GATA3 (By similarity).

**Cellular Location**

Cytoplasm. Nucleus {ECO:0000250|UniProtKB:Q03526}. Note=Localizes in the vicinity of cell surface receptors in the plasma membrane after receptor stimulation

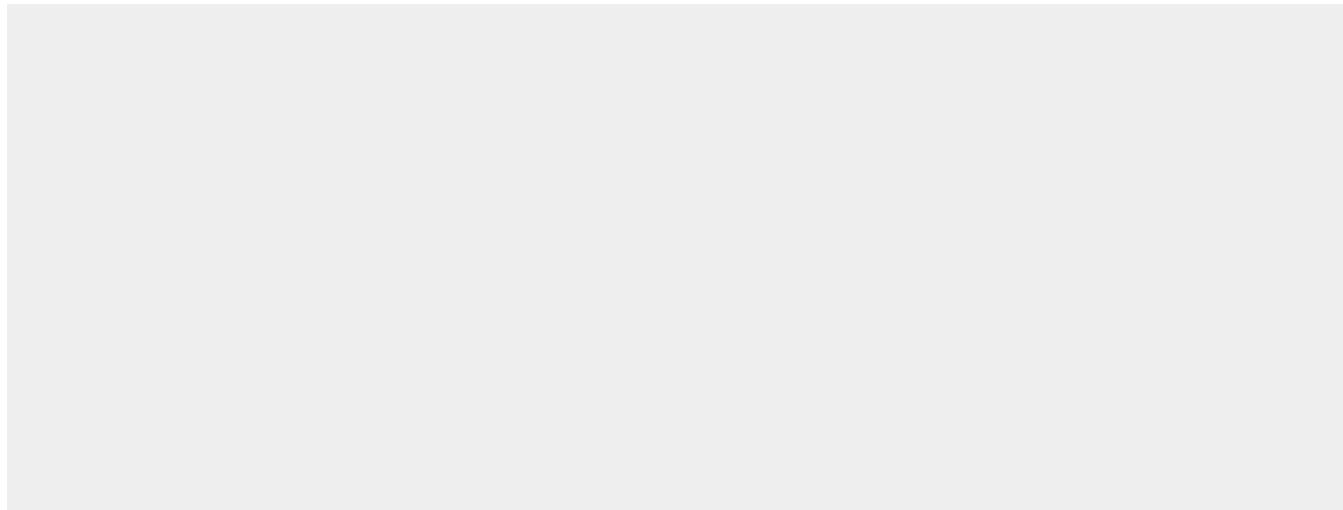
**Tissue Location**

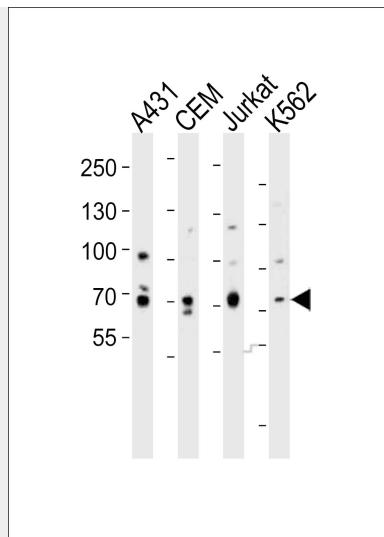
T-cell lines and natural killer cell lines.

**ITK Antibody (Center) - 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](#)

**ITK Antibody (Center) - Images**



Western blot analysis of lysates from A431, CEM, Jurkat, K562 cell line (from left to right), using ITK Antibody (Center)(Cat. #AP20969a). AP20969a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.

#### ITK Antibody (Center) - 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.

#### ITK Antibody (Center) - References

- Tanaka N.,et al.FEBS Lett. 324:1-5(1993).
- Gibson S.,et al.Blood 82:1561-1572(1993).
- Ota T.,et al.Nat. Genet. 36:40-45(2004).
- Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.
- Nore B.F.,et al.Biochim. Biophys. Acta 1645:123-132(2003).