

**ITK Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO1179a****Specification**

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**ITK Antibody - Product Information**

Application	WB, E
Primary Accession	<a href="#">Q08881</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1

**Description**

ITK: IL2-inducible T-cell kinase. This gene encodes an intracellular tyrosine kinase expressed in T-cells. The protein contains both SH2 and SH3 domains which are often found in intracellular kinases. It is thought to play a role in T-cell proliferation and differentiation.

**Immunogen**

Purified recombinant fragment of ITK (aa2-110) expressed in E. Coli. <br />

**Formulation**

Ascitic fluid containing 0.03% sodium azide.

**ITK Antibody - Additional Information**

**Gene ID** 3702

**Other Names**

Tyrosine-protein kinase ITK/TSK, 2.7.10.2, 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

**Dilution**

WB~~1/500 - 1/2000

E~~N/A

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

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

**ITK Antibody - 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:<a href="http://www.uniprot.org/citations/12186560" target="\_blank">12186560</a>, PubMed:<a href="http://www.uniprot.org/citations/12682224" target="\_blank">12682224</a>, PubMed:<a href="http://www.uniprot.org/citations/21725281" target="\_blank">21725281</a>). 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

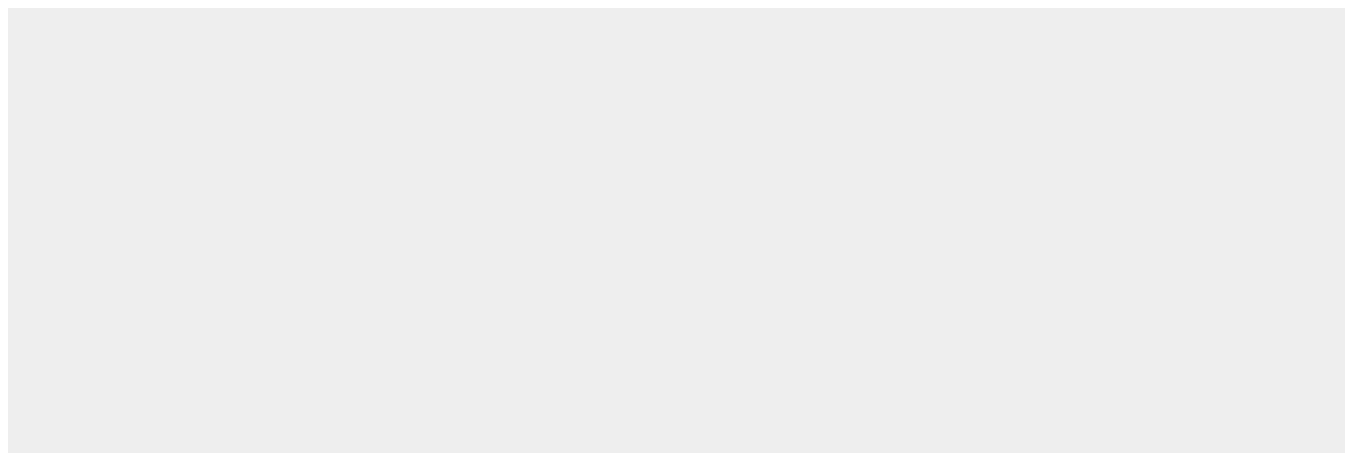
**Tissue Location**

T-cell lines and natural killer cell lines.

**ITK Antibody - 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 - Images**

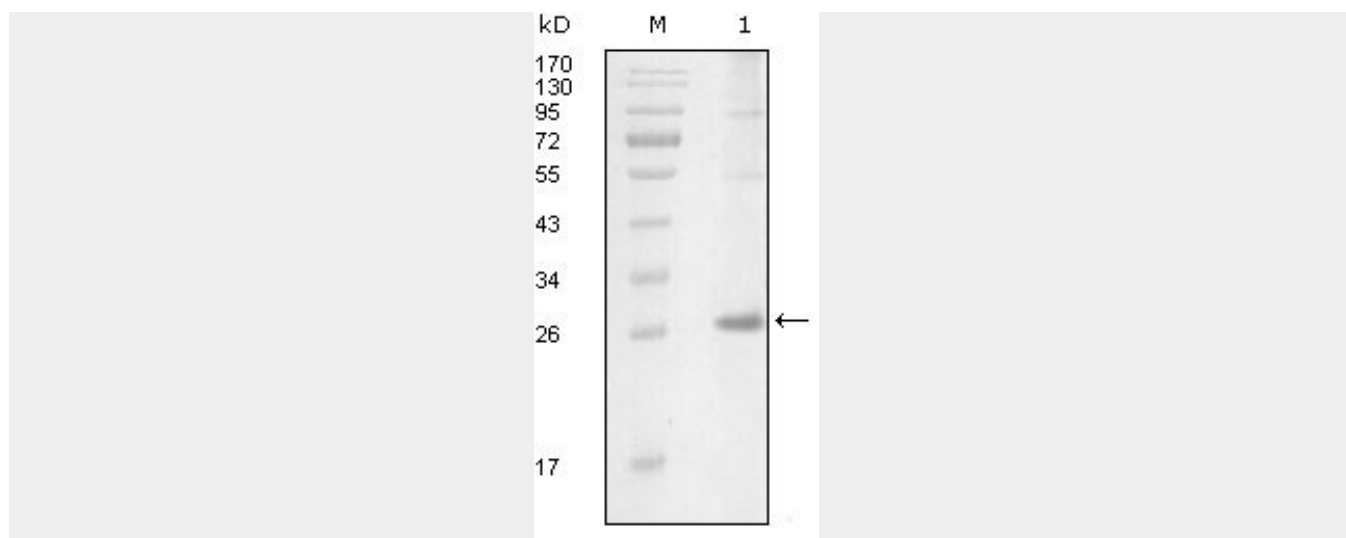


Figure 1: Western blot analysis using ITK mouse mAb against truncated Trx-ITK recombinant protein (1).

#### **ITK Antibody - References**

1. Int Immunol. 2001 Oct;13(10):1265-74. 2. Biochemistry. 2002 Aug 27;41(34):10732-40. 3. J Allergy Clin Immunol. 2005 Sep;116(3):650-6.