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ITK Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7711C

Specification

ITK Antibody (Center) - Product Information

Application	**WB,E**
Primary Accession	Q08881
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**71831**
Antigen Region	**169-198**

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 rabbits immunized with a KLH conjugated synthetic peptide between 169-198 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 prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

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 Cytomety
- Cell Culture

ITK Antibody (Center) - Images

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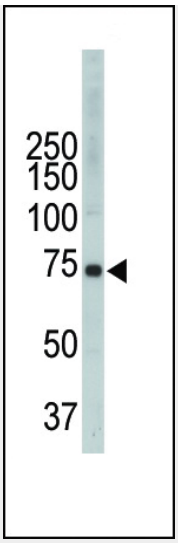

The anti-ITK Pab (Cat. #AP7711c) is used in Western blot to detect ITK in CEM cell lysate.

ITK Antibody (Center) - Background

ITK is 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.

ITK Antibody (Center) - References

Brazin, K.N., et al., Proc. Natl. Acad. Sci. U.S.A. 99(4):1899-1904 (2002).
Hawkins, J., et al., Protein Expr. Purif. 22(2):211-219 (2001).
Janis, E.M., et al., Genomics 23(1):269-271 (1994).
Gibson, S., et al., Blood 82(5):1561-1572 (1993).
Tanaka, N., et al., FEBS Lett. 324(1):1-5 (1993).