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Anti-TXK Antibody

Catalog # ABV11934

Product Information

Application	WB, IHC
Primary Accession	P42681
Reactivity	Human, Mouse, Rat
Host	Rabbit
Isotype	Rabbit IgG
Calculated MW	61258

Additional Information

Gene ID	7294
Positive Control	WB: Jurkat, THP1, mouse spleen, rat spleen lysate; IHC: human placenta tissue section
Application & Usage	WB; 1:500 – 1:2000, IHC; 1:50 – 1:200
Other Names	PTK4; RLK; Tyrosine-protein kinase TXK; Protein-tyrosine kinase 4; Resting lymphocyte kinase
Target/Specificity	TXK
Antibody Form	Liquid
Appearance	Colorless liquid
Handling	The antibody solution should be gently mixed before use
Reconstitution & Storage	-20°C
Background Descriptions	
Precautions	Anti-TXK Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TXK
Synonyms	PTK4, RLK
Function	Non-receptor tyrosine kinase that plays a redundant role with ITK 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 leads to the recruitment of TXK to the cell membrane, where it is phosphorylated at Tyr-420. Phosphorylation leads to

TXK full activation. Also contributes to signaling from many receptors and participates in multiple downstream pathways, including regulation of the actin cytoskeleton. Like ITK, can phosphorylate PLCG1, leading to its localization in lipid rafts and activation, followed by 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. Plays a role in the positive regulation of IFNG transcription in T- helper 1 cells as part of an IFNG promoter-binding complex with PARP1 and EEF1A1 (PubMed:11859127, PubMed:17177976). Within the complex, phosphorylates both PARP1 and EEF1A1 (PubMed:17177976). Also phosphorylates key sites in LCP2 leading to the up-regulation of Th1 preferred cytokine IL-2. Phosphorylates 'Tyr-201' of CTLA4 which leads to the association of PI-3 kinase with the CTLA4 receptor.

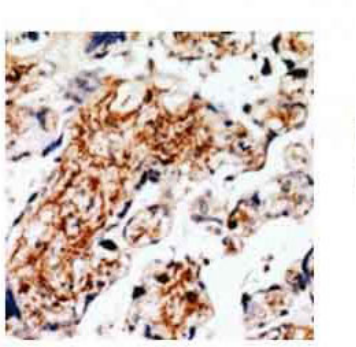
Cellular Location

Cytoplasm. Nucleus. Cell membrane; Peripheral membrane protein. Note=Localizes in the vicinity of cell surface receptors in the plasma membrane after receptor stimulation Translocates into the nucleus and enhances IFN-gamma gene transcription in T-cells

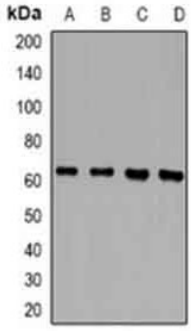
Tissue Location

Expressed in T-cells and some myeloid cell lines. Expressed in Th1/Th0 cells with IFN-gamma-producing potential

Images



Immunohistochemical analysis of RLK staining in human placenta formalin fixed paraffin embedded tissue section.



WB analysis expression in Jurkat (A);THP1(B); mouse spleen (C);;mouse spleen □rat spleen(D) whole cell lysates

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.