
Product Name: ITPK1 Rabbit Polyclonal Antibody**Catalog #: APRab12799**

For research use only.

Summary

Description	Rabbit polyclonal Antibody
Host	Rabbit
Application	WB,IHC,ELISA
Reactivity	Human,Mouse
Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Concentration	1mg/ml
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:500-1:2000,IHC 1:50-1:300,ELISA 1:2000-1:20000
Molecular Weight	50kDa

Antigen Information

Gene Name	ITPK1
Alternative Names	ITPK1; Inositol-tetrakisphosphate 1-kinase; Inositol 1; 3,4-trisphosphate 5/6-kinase; Inositol-triphosphate 5/6-kinase; Ins(1,3,4)P(3) 5/6-kinase
Gene ID	3705.0
SwissProt ID	Q13572
Immunogen	The antiserum was produced against synthesized peptide derived from human ITPK1. AA range:81-130

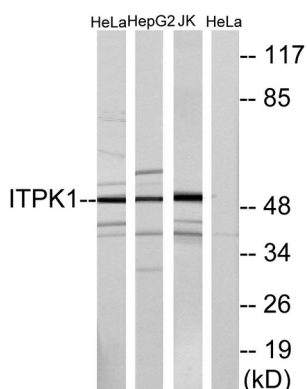
Background

This gene encodes an enzyme that belongs to the inositol 1,3,4-trisphosphate 5/6-kinase family. This enzyme regulates the synthesis of inositol tetrakisphosphate, and downstream products, inositol pentakisphosphate and inositol hexakisphosphate. Inositol metabolism plays a role in the development of the neural tube. Disruptions in this gene are thought to be associated with neural tube defects. A pseudogene of this gene has been identified on chromosome X. [provided by RefSeq, Jul 2016],catalytic activity:ATP + 1D-myo-inositol 1,3,4-trisphosphate = ADP + 1D-myo-inositol 1,3,4,5-tetrakisphosphate.,catalytic activity:ATP + 1D-myo-inositol 1,3,4-trisphosphate = ADP + 1D-myo-inositol 1,3,4,6-tetrakisphosphate.,catalytic activity:ATP + 1D-myo-inositol 3,4,5,6-tetrakisphosphate = ADP + 1D-myo-inositol 1,3,4,5,6-pentakisphosphate.,caution:PubMed:11533064 detected some protein kinase activity and ability to phosphorylate transcription factors c-jun/JUN and ATF2. However, PubMed:15762844 showed that it does not have protein kinase activity.,cofactor:Binds 2 magnesium ions per subunit.,function:Kinase that can phosphorylate various inositol polyphosphate such as Ins(3,4,5,6)P4 or Ins(1,3,4)P3. Phosphorylates Ins(3,4,5,6)P4 at position 1 to form Ins(1,3,4,5,6)P5. This reaction is thought to have regulatory importance, since Ins(3,4,5,6)P4 is an inhibitor of plasma membrane Ca(2+)-activated Cl(-) channels, while Ins(1,3,4,5,6)P5 is not. Also phosphorylates Ins(1,3,4)P3 on O-5 and O-6 to form Ins(1,3,4,6)P4, an essential molecule in the hexakisphosphate (InsP6) pathway. Also acts as an inositol polyphosphate phosphatase that dephosphorylate Ins(1,3,4,5)P4 and Ins(1,3,4,6)P4 to Ins(1,3,4)P3, and Ins(1,3,4,5,6)P5 to Ins(3,4,5,6)P4. May also act as an isomerase that interconverts the inositol tetrakisphosphate isomers Ins(1,3,4,5)P4 and Ins(1,3,4,6)P4 in the presence of ADP and magnesium. Probably acts as the rate-limiting enzyme of the InsP6 pathway. Modifies TNF-alpha-induced apoptosis by interfering with the activation of TNFRSF1A-associated death domain.,similarity:Belongs to the ITPK1 family.,similarity:Contains 1 ATP-grasp domain.,subunit:Monomer. Interacts with CSN1.,tissue specificity:Expressed in brain > heart > skeletal muscle = kidney = pancreas = liver = placenta > lung. In brain, it is expressed in cerebellum, cerebral cortex, medulla, spinal cord, occipital lobe, frontal lobe, temporal lobe and putamen.,

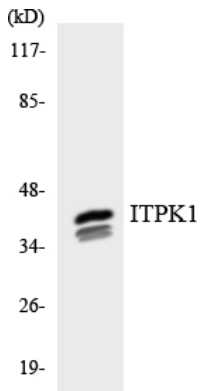
Research Area

Inositol phosphate metabolism;Phosphatidylinositol signaling system;

Image Data



Western blot analysis of lysates from HeLa, HepG2, and Jurkat cells, using ITPK1 Antibody. The lane on the right is blocked with the synthesized peptide.



Western blot analysis of the lysates from HepG2 cells using ITPK1 antibody.