

ITPK1 Antibody (aa81-130)
Rabbit Polyclonal Antibody
Catalog # ALS15964**Specification****ITPK1 Antibody (aa81-130) - Product Information**

Application	WB, IHC-P, E
Primary Accession	Q13572
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	46kDa KDa
Dilution	WB~~1:1000 IHC-P~~N/A E~~N/A

ITPK1 Antibody (aa81-130) - Additional Information**Gene ID** 3705**Other Names**

Inositol-tetrakisphosphate 1-kinase, 2.7.1.134, Inositol 1, 3, 4-trisphosphate 5/6-kinase, Inositol-triphosphate 5/6-kinase, Ins(1, 3, 4)P(3) 5/6-kinase, 2.7.1.159, ITPK1

Target/Specificity

ITPK1 Antibody detects endogenous levels of total ITPK1 protein.

Reconstitution & Storage

Store at -20°C for up to one year.

Precautions

ITPK1 Antibody (aa81-130) is for research use only and not for use in diagnostic or therapeutic procedures.

ITPK1 Antibody (aa81-130) - Protein Information**Name** ITPK1 ([HGNC:6177](#))**Function**

Kinase that can phosphorylate various inositol polyphosphate such as Ins(3,4,5,6)P4 or Ins(1,3,4)P3 (PubMed:11042108, PubMed:8662638). Phosphorylates Ins(3,4,5,6)P4 at position 1 to form Ins(1,3,4,5,6)P5 (PubMed:11042108). 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 (PubMed:11042108, PubMed:8662638). Also acts as an inositol polyphosphate phosphatase that dephosphorylates 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 (PubMed:11909533, PubMed:17616525). 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 (PubMed:11909533). 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 (PubMed:11909533, PubMed:12925536, PubMed:17616525). Plays an important role in MLKL-mediated necroptosis. Produces highly phosphorylated inositol phosphates such as inositolhexakisphosphate (InsP6) which bind to MLKL mediating the release of an N-terminal auto-inhibitory region leading to its activation. Essential for activated phospho-MLKL to oligomerize and localize to the cell membrane during necroptosis (PubMed:17616525).

Tissue Location

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.

Volume

250 µl

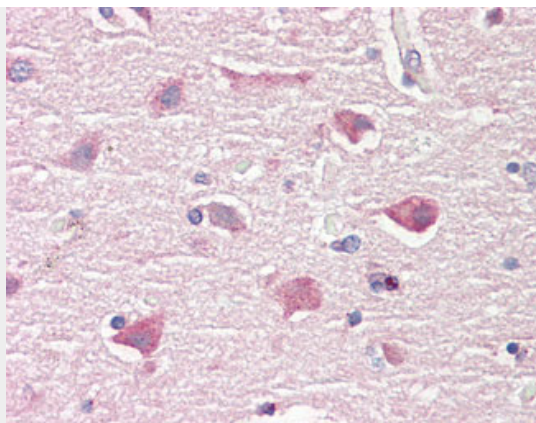
ITPK1 Antibody (aa81-130) - Protocols

Provided below are standard protocols that you may find useful for product applications.

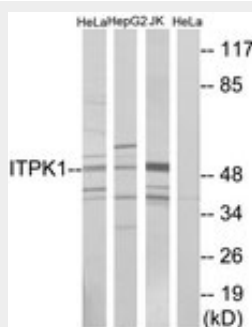
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

ITPK1 Antibody (aa81-130) - Images





Anti-ITPK1 antibody IHC staining of human brain, cortex.



Western blot of extracts from HeLa/HepG2/Jurkat cells, using ITPK1 Antibody.

ITPK1 Antibody (aa81-130) - Background

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.

ITPK1 Antibody (aa81-130) - References

- Wilson M.P.,et al.J. Biol. Chem. 271:11904-11910(1996).
- Yang X.,et al.Biochem. J. 351:551-555(2000).
- Wilson M.P.,et al.J. Biol. Chem. 276:40998-41004(2001).
- Ho M.W.Y.,et al.Curr. Biol. 12:477-482(2002).
- Sun Y.,et al.J. Biol. Chem. 277:45759-45764(2002).