

ITPK1 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP18953a**Specification**

ITPK1 Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [Q13572](#)**ITPK1 Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 3705**Other Names**

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

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

ITPK1 Antibody (N-term) Blocking Peptide - 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](http://www.uniprot.org/citations/11042108), PubMed: [8662638](http://www.uniprot.org/citations/8662638)). Phosphorylates Ins(3,4,5,6)P4 at position 1 to form Ins(1,3,4,5,6)P5 (PubMed: [11042108](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/11042108), PubMed: [8662638](http://www.uniprot.org/citations/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: [17616525](http://www.uniprot.org/citations/17616525), PubMed: [11909533](http://www.uniprot.org/citations/11909533)). 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](#)).

[11909533](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/11909533)), PubMed:[12925536](http://www.uniprot.org/citations/12925536)), PubMed:[17616525](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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.

ITPK1 Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

ITPK1 Antibody (N-term) Blocking Peptide - Images

ITPK1 Antibody (N-term) Blocking Peptide - Background

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ITPK1 Antibody (N-term) Blocking Peptide - References

Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) ;Yoshida, T., et al. Int. J. Mol. Med. 25(4):649-656(2010)Oguri, M., et al. Am. J. Hypertens. 23(1):70-77(2010)Yoshida, T., et al. Int. J. Mol. Med. 24(4):539-547(2009)Chamberlain, P.P., et al. J. Biol. Chem. 282(38):28117-28125(2007)