

ARG42109 anti-ITPK1 antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes ITPK1
Tested Reactivity	Hu
Tested Application	FACS, IHC-P, IP, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	ITPK1
Species	Human
Immunogen	Synthetic peptide of Human ITPK1.
Conjugation	Un-conjugated
Alternate Names	1,3,4; EC 2.7.1.159; Inositol 1,3,4-trisphosphate 5/6-kinase; Inositol-triphosphate 5/6-kinase; 3; Ins; Inositol-tetrakisphosphate 1-kinase; EC 2.7.1.134; ITRPK1

Application Instructions

Application table	Application	Dilution
	FACS	1:20
	IHC-P	1:20
	IP	1:20
	WB	1:2000 - 1:10000

Application Note * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

Form	Liquid
Purification	Affinity purified.
Buffer	50 mM Tris-Glycine (pH 7.4), 150 mM NaCl, 0.01% Sodium azide, 40% Glycerol and 0.05% BSA.
Preservative	0.01% Sodium azide
Stabilizer	40% Glycerol and 0.05% BSA
Concentration	Batch dependent
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	ITPK1
Gene Full Name	inositol-tetrakisphosphate 1-kinase
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]
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 (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). [UniProt]
Calculated Mw	46 kDa
PTM	Acetylation by EP300 and CREBBP destabilizes ITPK1, and down-regulates enzymatic activity. Deacetylated by SIRT1. [UniProt]