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IPMK Polyclonal Antibody

Catalog # AP70567

Product Information

Application	WB, IHC-P, IF, ICC, E
Primary Accession	Q8NFU5
Reactivity	Human, Mouse, Rat, Monkey
Host	Rabbit
Clonality	Polyclonal
Calculated MW	47222

Additional Information

Gene ID	253430
Other Names	IPMK; IMPK; Inositol polyphosphate multikinase; Inositol 1; 3, 4, 6-tetrakisphosphate 5-kinase
Dilution	WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/40000. Not yet tested in other applications. IHC-P~~N/A IF~~1:50~200 ICC~~N/A E~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

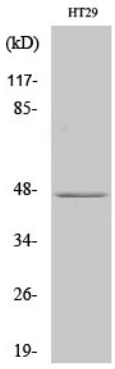
Name	IPMK
Synonyms	IMPK {ECO:0000303|PubMed:29883610}
Function	Inositol phosphate kinase with a broad substrate specificity (PubMed:12027805, PubMed:12223481, PubMed:28882892, PubMed:30420721, PubMed:30624931). Phosphorylates inositol 1,4,5-trisphosphate (Ins(1,4,5)P3) first to inositol 1,3,4,5-tetrakisphosphate and then to inositol 1,3,4,5,6-pentakisphosphate (Ins(1,3,4,5,6)P5) (PubMed:12027805, PubMed:12223481, PubMed:28882892, PubMed:30624931). Phosphorylates inositol 1,3,4,6-tetrakisphosphate (Ins(1,3,4,6)P4) (PubMed:12223481). Phosphorylates inositol 1,4,5,6-tetrakisphosphate (Ins(1,4,5,6)P4) (By similarity). Phosphorylates glycero-3-phospho-1D- myo-inositol 4,5-bisphosphate to glycero-3-phospho-1D-myo-inositol 3,4,5-trisphosphate (PubMed:28882892, PubMed:30420721). Plays an important role in MLKL-mediated necroptosis via its role in the biosynthesis of inositol pentakisphosphate (InsP5) and inositol hexakisphosphate (InsP6). Binding of these highly phosphorylated

	inositol phosphates to MLKL mediates the release of an N-terminal auto-inhibitory region, leading to activation of the kinase. Essential for activated phospho-MLKL to oligomerize and localize to the cell membrane during necroptosis (PubMed:29883610). Required for normal embryonic development, probably via its role in the biosynthesis of inositol 1,3,4,5,6-pentakisphosphate (Ins(1,3,4,5,6)P5) and inositol hexakisphosphate (InsP6) (By similarity).
Cellular Location	Nucleus.
Tissue Location	Ubiquitous, with the highest expression in skeletal muscle, liver, placenta, lung, peripheral blood leukocytes, kidney, spleen and colon.

Background

Inositol phosphate kinase with a broad substrate specificity. Has a preference for inositol 1,4,5-trisphosphate (Ins(1,4,5)P3) and inositol 1,3,4,6-tetrakisphosphate (Ins(1,3,4,6)P4) (PubMed:12027805, PubMed:12223481). 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:29883610).

Images



Western Blot analysis of various cells using IPMK Polyclonal Antibody cells nucleus extracted by Minute TM Cytoplasmic and Nuclear Fractionation kit (SC-003,Inventbiotech,MN,USA).