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IP3R-I Polyclonal Antibody

Catalog # AP73846

Product Information

Application	WB
Primary Accession	Q14643
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	313929

Additional Information

Gene ID	3708
Other Names	ITPR1; INSP3R1; Inositol 1, 4, 5-trisphosphate receptor type 1; IP3 receptor isoform 1; IP3R 1; InsP3R1; Type 1 inositol 1, 4, 5-trisphosphate receptor; Type 1 InsP3 receptor
Dilution	WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/10000. Not yet tested in other applications.
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

Name	ITPR1 {ECO:0000303|PubMed:7852357, ECO:0000312|HGNC:HGNC:6180}
Function	Inositol 1,4,5-trisphosphate-gated calcium channel that, upon inositol 1,4,5-trisphosphate binding, mediates calcium release from the endoplasmic reticulum (ER) (PubMed:10620513, PubMed:27108797). Undergoes conformational changes upon ligand binding, suggesting structural flexibility that allows the channel to switch from a closed state, capable of interacting with its ligands such as 1,4,5- trisphosphate and calcium, to an open state, capable of transferring calcium ions across the ER membrane (By similarity). Cytoplasmic calcium released from the ER triggers apoptosis by the activation of CAMK2 complex (By similarity). Involved in the regulation of epithelial secretion of electrolytes and fluid through the interaction with AHCYL1 (By similarity). Part of a complex composed of HSPA9, ITPR1 and VDAC1 that regulates mitochondrial calcium-dependent apoptosis by facilitating calcium transport from the ER lumen to the mitochondria intermembrane space thus providing calcium for the downstream calcium channel MCU that directly releases it into mitochondria matrix (By similarity). Regulates fertilization and egg activation by tuning the frequency and amplitude of calcium oscillations

(By similarity).

Cellular Location Endoplasmic reticulum membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:P29994, ECO:0000255} Cytoplasmic vesicle, secretory vesicle membrane {ECO:0000250|UniProtKB:Q9TU34}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P29994, ECO:0000255}. Cytoplasm, perinuclear region. Note=Found in a complex with HSPA9 and VDAC1 at the endoplasmic reticulum-mitochondria contact sites. {ECO:0000250|UniProtKB:P29994}

Tissue Location Widely expressed..

Background

Intracellular channel that mediates calcium release from the endoplasmic reticulum following stimulation by inositol 1,4,5- trisphosphate (PubMed:27108797). Involved in the regulation of epithelial secretion of electrolytes and fluid through the interaction with AHCYL1 (By similarity). Plays a role in ER stress-induced apoptosis. Cytoplasmic calcium released from the ER triggers apoptosis by the activation of CaM kinase II, eventually leading to the activation of downstream apoptosis pathways (By similarity).

Images

Western blot analysis of 293T using IP3R-I antibody. Antibody was diluted at 1:500. Secondary antibody was diluted at 1:20000