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Anti-IP3R Antibody

Rabbit polyclonal antibody to IP3R
Catalog # AP61189

Product Information

Application	WB, IF/IC, IHC
Primary Accession	Q14643
Other Accession	P11881
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	313929

Additional Information

Gene ID	3708
Other Names	INSP3R1; Inositol 145-trisphosphate receptor type 1; IP3 receptor isoform 1; IP3R 1; InsP3R1; Type 1 inositol 145-trisphosphate receptor; Type 1 InsP3 receptor
Target/Specificity	Recognizes endogenous levels of IP3R protein.
Dilution	WB~~WB (1/500 - 1/1000), IHC (1/50 - 1/200), IF/IC (1/100 - 1/500) IF/IC~~N/A IHC~~WB (1/500 - 1/1000), IHC (1/50 - 1/200), IF/IC (1/100 - 1/500)
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

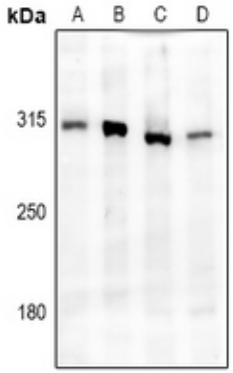
Name	ITPR1 {ECO:0000303|PubMed:7852357, ECO:0000312|HGNC:HGNC:6180}
Function	Inositol 1,4,5-trisphosphate-gated calcium channel that, upon inositol 1,4,5-trisphosphate binding, mediates calcium release from the endoplasmic reticulum (ER) (PubMed:10620513, PubMed:27108797). Undergoes conformational changes 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..

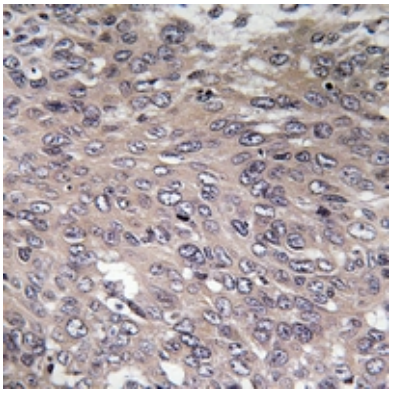
Background

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human IP3R. The exact sequence is proprietary.

Images

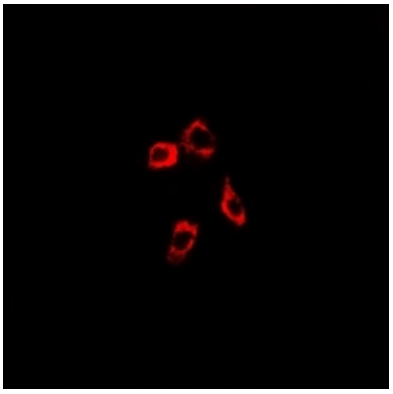


Western blot analysis of IP3R expression in mouse brain (A), rat brain (B), U87MG (C), SGC7901 (D) whole cell lysates.



Immunohistochemical analysis of IP3R staining in human cervix cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Immunofluorescent analysis of IP3R staining in COS7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a Alexa Fluor 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.



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