

## Rabbit IP3 Receptor Polyclonal Antibody | anti-IP3 antibody

IP3 Receptor Antibody

| CATALOG # | HOST   | REACTIVITY        | APPLICATIONS                                                 |
|-----------|--------|-------------------|--------------------------------------------------------------|
| AAA329583 | Rabbit | Human, Mouse, Rat | ELISA, Immunocytochemistry, Immunofluorescence, Western Blot |

### PRODUCT SYNONYMS

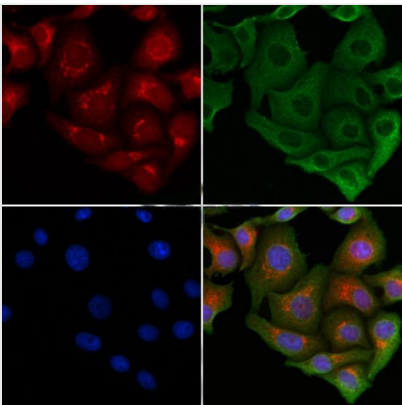
IP3 Receptor; Polyclonal Antibody; IP3 Receptor Antibody; 4; 5-trisphosphate receptor; 5-trisphosphate receptor type 1; DKFZp313E1334; DKFZp313N1434; inositol 1 4 5 triphosphate receptor type 1; Inositol 1 4 5 trisphosphate Receptor Type 1; Inositol 1; InsP3R1; IP3; IP3 receptor; IP3 receptor isoform 1; IP3R 1; IP3R; IP3R1; ITPR 1; Itp1; ITPR1\_HUMAN; SCA15; SCA16; SCA29; Type 1 inositol 1 4 5 trisphosphate receptor; Type 1 inositol 1; Type 1 InsP3 receptor; anti-IP3 antibody

### PRODUCT SPECIFICATIONS

|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                                          | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Reactivity                                    | Human, Mouse, Rat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Clonality                                     | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Isotype                                       | Rabbit IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Specificity                                   | IP3 Receptor Antibody detects endogenous levels of total IP3 Receptor.<br>Tissue Specificity: Widely expressed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Purity/Purification                           | The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Form/Format                                   | Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Concentration                                 | 1mg/ml (varies by lot)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Applicable Applications for anti-IP3 antibody | ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Immunogen                                     | A synthesized peptide derived from human IP3 Receptor.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Conjugation                                   | Unconjugated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Fragment                                      | Fab fragment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Post Translational Modifications              | Phosphorylated on tyrosine residues. Ubiquitination at multiple lysines targets ITPR1 for proteasomal degradation. Approximately 40% of the ITPR1-associated ubiquitin is monoubiquitin, and polyubiquitins are both 'Lys-48'- and 'Lys-63'-linked (By similarity). Phosphorylated by cAMP kinase (PKA). Phosphorylation prevents the ligand-induced opening of the calcium channels. Phosphorylation by PKA increases the interaction with inositol 1,4,5-trisphosphate and decreases the interaction with AHCYL1. Palmitoylated by ZDHHC6 in immune cells, leading to regulate ITPR1 stability and function.                                                                                                                                                                                                                                                                         |
| Subunit Structure                             | Homotetramer. Interacts with TRPC4. The PPXXF motif binds HOM1, HOM2 and HOM3. Interacts with RYR1, RYR2, ITPR1, SHANK1 and SHANK3. Interacts with ERP44 in a pH-, redox state- and calcium-dependent manner which results in the inhibition the calcium channel activity. The strength of this interaction inversely correlates with calcium concentration. Part of cGMP kinase signaling complex at least composed of ACTA2/alpha-actin, CNN1/calponin H1, PLN/phospholamban, PRKG1 and ITPR1. Interacts with MRV1 and CABP1 (via N-terminus). Interacts with TESPA1. Interacts (when not phosphorylated) with AHCYL1 (when phosphorylated); the interaction suppresses inositol 1,4,5-trisphosphate binding to ITPR1. Interacts with AHCYL2 (with lower affinity than with AHCYL1). Interacts with BOK (via BH4 domain); protects ITPR1 from proteolysis by CASP3 during apoptosis. |
| Similarity                                    | The receptor contains a calcium channel in its C-terminal extremity. Its large N-terminal cytoplasmic region has the ligand-binding site in the N-terminus and modulatory sites in the middle portion immediately upstream of the channel region. Belongs to the InsP3 receptor family.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

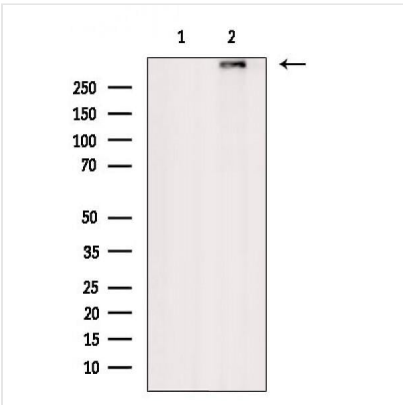
|                         |                                                                                                                                                                                                                                              |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subcellular Location    | Endoplasmic reticulum membrane>Multi-pass membrane protein. Cytoplasmic vesicle>Secretory vesicle membrane>Multi-pass membrane protein. Cytoplasm>Perinuclear region.<br>Note: Endoplasmic reticulum and secretory granules (By similarity). |
| Preparation and Storage | Store at -20 degree C. Stable for 12 months from date of receipt.                                                                                                                                                                            |

### IMAGES



#### IF (Immunofluorescence)

Staining HeLa cells by IF/ICC. The samples were fixed with PFA and permeabilized in 0.1% Triton X-100,then blocked in 10% serum for 45 minutes at 25 degree C. Samples were then incubated with primary Ab(AF6591) and mouse anti-beta tubulin Ab(T0023) for 1 hour at 37 degree C. An AlexaFluor594 conjugated goat anti-rabbit IgG(H+L) Ab(Red) and an AlexaFluor488 conjugated goat anti-mouse IgG(H+L) Ab(Green) were used as the secondary antibody.The nuclear counter stain is DAPI (blue).



#### WB (Western Blot)

Western blot analysis of extracts from Mouse brain, using IP3 Receptor Antibody. The lane on the left was treated with blocking peptide.

### ADDITIONAL INFORMATION

|                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for anti-IP3 antibody | Intracellular channel that mediates calcium release from the endoplasmic reticulum following stimulation by inositol 1,4,5-trisphosphate. 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). |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### NCBI AND UNIPROT INFORMATION

|                                  |                                                                                                                                                                                       |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NCBI GI #                        | 269954690                                                                                                                                                                             |
| NCBI GeneID                      | 3708                                                                                                                                                                                  |
| NCBI Accession #                 | NP_001093422.2                                                                                                                                                                        |
| NCBI GenBank Nucleotide #        | NM_001099952.2                                                                                                                                                                        |
| UniProt Accession #              | Q14643; Q14660; Q99897                                                                                                                                                                |
| Molecular Weight                 | 313,945 Da                                                                                                                                                                            |
| NCBI Official Full Name          | inositol 1,4,5-trisphosphate receptor type 1 isoform 1                                                                                                                                |
| NCBI Official Synonym Full Names | inositol 1,4,5-trisphosphate receptor, type 1                                                                                                                                         |
| NCBI Official Symbol             | ITPR1                                                                                                                                                                                 |
| NCBI Official Synonym Symbols    | IP3R; IP3R1; SCA15; SCA16; SCA29; INSP3R1                                                                                                                                             |
| NCBI Protein Information         | inositol 1,4,5-trisphosphate receptor type 1; IP3R 1; IP3 receptor; type 1 InsP3 receptor; inositol 1,4,5-triphosphate receptor, type 1; type 1 inositol 1,4,5-trisphosphate receptor |
| UniProt Protein Name             | Inositol 1,4,5-trisphosphate receptor type 1                                                                                                                                          |

|                            |                          |
|----------------------------|--------------------------|
| UniProt Gene Name          | ITPR1                    |
| UniProt Synonym Gene Names | INSP3R1; IP3R 1; InsP3R1 |
| UniProt Entry Name         | ITPR1_HUMAN              |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/ip3-receptor-antibody-peptide-elisa-immunocytochemistry-immunofluorescence-western-blot-elisa/329583>