

Anti-IP3 Receptor Picoband Antibody
Catalog # ABO11916

Specification

Anti-IP3 Receptor Picoband Antibody - Product Information

Application	WB, IHC
Primary Accession	Q14643
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Inositol 1,4,5-trisphosphate receptor type 1(ITPR1) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-IP3 Receptor Picoband Antibody - Additional Information

Gene ID 3708

Other Names

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, ITPR1, INSP3R1

Calculated MW

313929 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Rat

Subcellular Localization

Endoplasmic reticulum membrane; Multi-pass membrane protein.

Tissue Specificity

Widely expressed.

Protein Name

Inositol 1,4,5-trisphosphate receptor type 1

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

Immunogen

E.coli-derived human IP3 receptor recombinant protein (Position: A2411-A2758). Human IP3 receptor shares 98% and 97% amino acid (aa) sequences identity with mouse and rat IP3 receptor, respectively.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After r° Constitution, at 4°C for one month. It° Can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Sequence Similarities

Belongs to the InsP3 receptor family.

Anti-IP3 Receptor Picoband Antibody - 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..

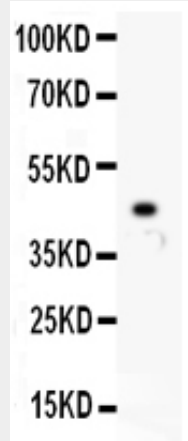
Anti-IP3 Receptor Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

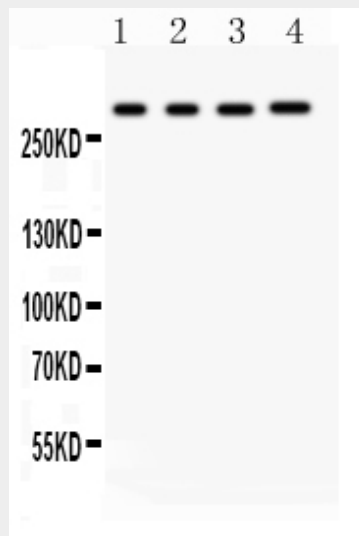
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)

- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

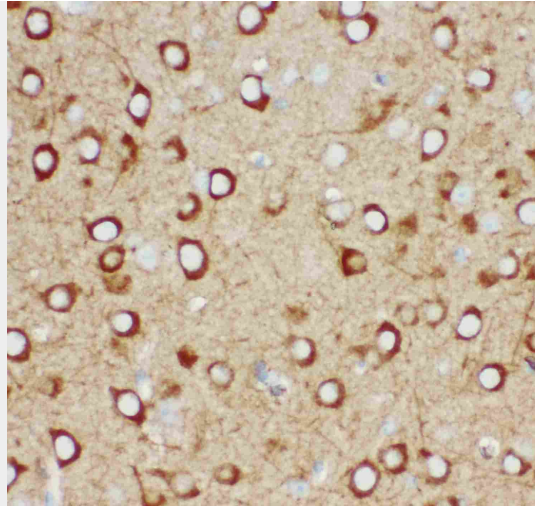
Anti-IP3 Receptor Picoband Antibody - Images



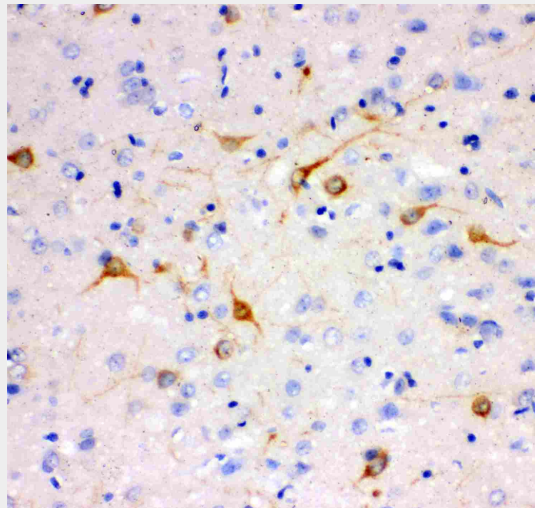
Anti- IP3 receptor antibody, ABO11916, Western blotting All lanes: Anti IP3 receptor (ABO11916) at 0.5ug/ml WB: Recombinant Human IP3 receptor Protein 0.5ng Predicted bind size: 45KD Observed bind size: 45KD



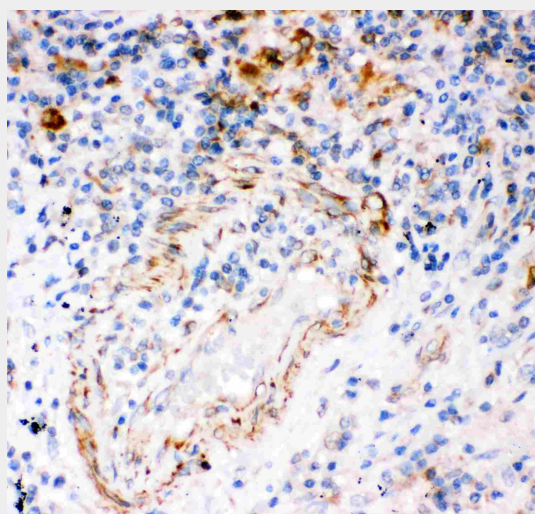
Anti- IP3 receptor antibody, ABO11916, Western blotting All lanes: Anti IP3 receptor (ABO11916) at 0.5ug/ml Lane 1: Rat Brain Tissue Lysate at 50ug Lane 2: Rat Liver Tissue Lysate at 50ug Lane 3: HELA Whole Cell Lysate at 40ug Lane 4: HEPG2 Whole Cell Lysate at 40ug Predicted bind size: 314KD Observed bind size: 314KD



Anti- IP3 receptor antibody, ABO11916,IHC(P)IHC(P): Mouse Brain Tissue



Anti- IP3 receptor antibody, ABO11916,IHC(P)IHC(P): Rat Brain Tissue



Anti- IP3 receptor antibody, ABO11916,IHC(P)IHC(P): Human Lung Cancer Tissue

Anti-IP3 Receptor Picoband Antibody - Background

Inositol 1,4,5-trisphosphate receptor type 1, also known as IP3R or IP3R1, is a protein that in humans is encoded by the ITPR1 gene. It is mapped to 3p26.1. The product of the ITPR1 gene is predominantly enriched in cerebellar Purkinje cells but is also concentrated in neurons in the hippocampal CA1 region, caudate-putamen, and cerebral cortex. The ITPR1 gene encodes the inositol 1,4,5-trisphosphate (IP3) receptor, an intracellular IP3-gated calcium channel that modulates intracellular calcium signaling. Upon stimulation by inositol 1,4,5-trisphosphate, this receptor mediates calcium release from the endoplasmic reticulum. Mutations in ITPR1 cause spinocerebellar ataxia type 15, a disease associated with a heterogeneous group of cerebellar disorders.