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Anti-IP3 Receptor Picoband Antibody

Catalog # ABO11916

Specification

Anti-IP3 Receptor Picoband Antibody - Product Information

Application	**WB, IHC-P**
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 NaN3.

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..

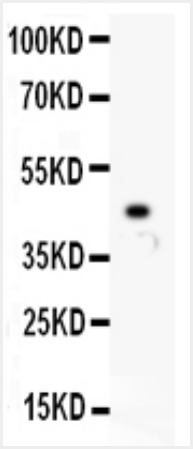
Anti-IP3 Receptor Picoband Antibody - Protocols

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

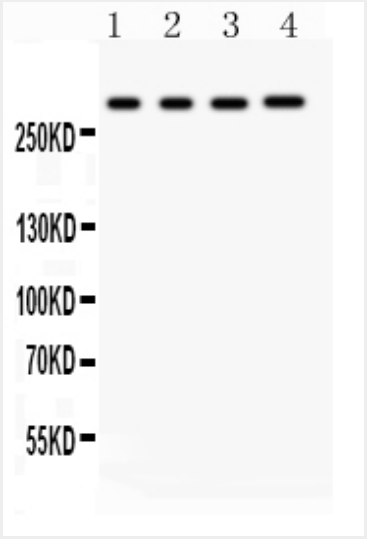
- Western Blot
- Blocking Peptides
- Dot Blot

- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-IP3 Receptor Picoband Antibody - Images



Anti- IP3 receptor antibody, ABO11916, Western blottingAll lanes: Anti IP3 receptor (ABO11916) at 0.5ug/mlWB: Recombinant Human IP3 receptor Protein 0.5ngPredicted bind size: 45KDObserved bind size: 45KD



Anti- IP3 receptor antibody, ABO11916, Western blottingAll lanes: Anti IP3 receptor (ABO11916) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: Rat Liver Tissue Lysate at 50ugLane 3: HELA Whole Cell Lysate at 40ugLane 4: HEPG2 Whole Cell Lysate at 40ugPredicted bind size: 314KDObserved bind size: 314KD

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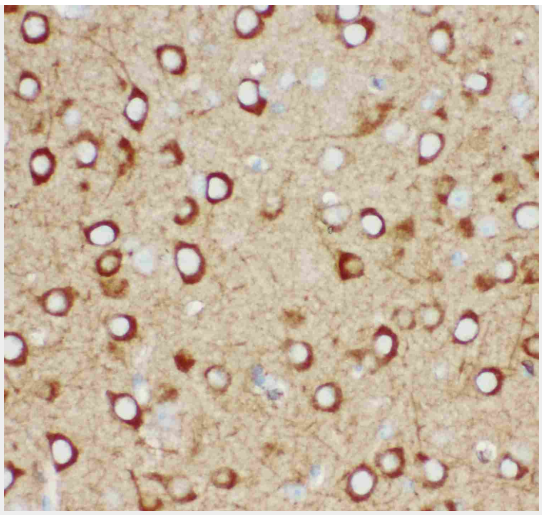
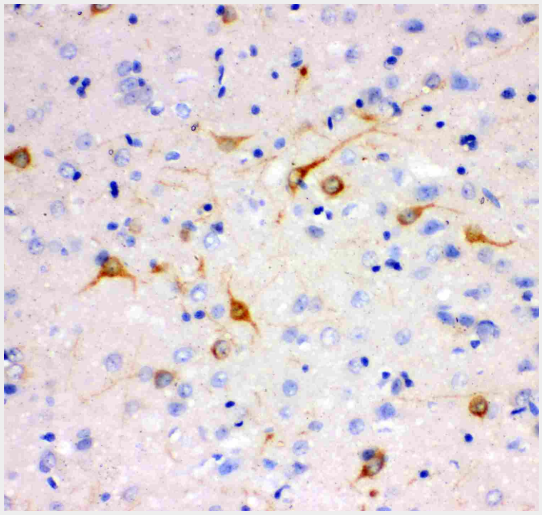
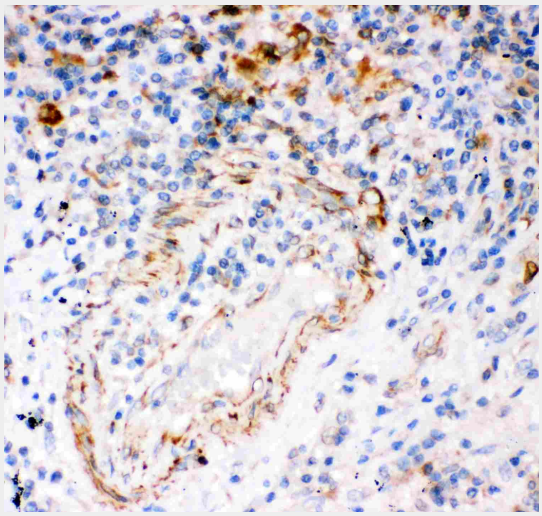


Anti- IP3 receptor antibody, ABO11916,IHC(P)IHC(P): Mouse Brain Tissue



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-triphosphate(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 an heterogeneous group of cerebellar disorders.