10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-ITPR3 Picoband Antibody

Catalog # ABO12118

Product Information

Application	WB, IHC-P
Primary Accession	Q14573
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Inositol 1,4,5-trisphosphate receptor type 3(ITPR3) detection. Tested with WB, IHC-P in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	3710
Other Names	Inositol 1, 4, 5-trisphosphate receptor type 3, IP3 receptor isoform 3, IP3R 3, InsP3R3, Type 3 inositol 1, 4, 5-trisphosphate receptor, Type 3 InsP3 receptor, ITPR3
Calculated MW	304106
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5 □g/ml, Human
Subcellular Localization	Endoplasmic reticulum membrane; Multi-pass membrane protein.
Tissue Specificity	Expressed in intestinal crypt and villus epithelial cells.
Source	Eukaryota
Protein Name	Inositol 1,4,5-trisphosphate receptor type 3
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human ITPR3 (70-95aa QYWKAKQTKQDKEKIADVVLLQKLQH), identical to the related mouse and rat sequences.
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.

Protein Information

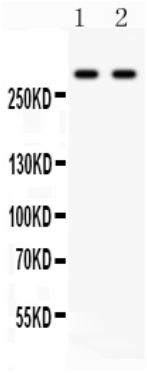
Name	ITPR3 (HGNC:6182)
Function	Inositol 1,4,5-trisphosphate-gated calcium channel that, upon 1D-myo-inositol 1,4,5-trisphosphate binding, transports calcium from the endoplasmic reticulum lumen to cytoplasm, thus releasing the intracellular calcium and therefore participates in cellular calcium ion homeostasis (PubMed:32949214, PubMed:37898605, PubMed:8081734, PubMed:8288584, PubMed:39560673). 1D-myo-inositol 1,4,5-trisphosphate binds to the ligand-free channel without altering its global conformation, yielding the low-energy resting state, then progresses through resting-to preactivated transitions to the higher energy preactivated state, which increases affinity for calcium, promoting binding of the low basal cytosolic calcium at the juxtamembrane domain (JD) site, favoring the transition through the ensemble of high-energy intermediate states along the trajectory to the fully-open activated state (PubMed:30013099, PubMed:35301323, PubMed:37898605). Upon opening, releases calcium in the cytosol where it can bind to the low- affinity cytoplasmic domain (CD) site and stabilizes the inhibited state to terminate calcium release (PubMed:30013099, PubMed:35301323, PubMed:37898605).
Cellular Location	Endoplasmic reticulum membrane; Multi-pass membrane protein. Cytoplasmic vesicle, secretory vesicle membrane {ECO:0000250|UniProtKB:Q8WN95}; Multi-pass membrane protein. Note=Also localizes at mitochondria-associated membranes (MAMs).
Tissue Location	Expressed in intestinal crypt and villus epithelial cells.

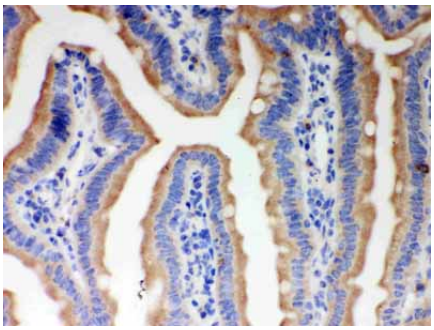
Background

ITPR3 encodes a receptor for inositol 1,4,5-trisphosphate, a second messenger that mediates the release of intracellular calcium. The receptor contains a calcium channel at the C-terminus and the ligand-binding site at the N-terminus. Knockout studies in mice suggest that type 2 and type 3 inositol 1,4,5-trisphosphate receptors play a key role in exocrine secretion underlying energy metabolism and growth. ITP3 channels serve an important role in the taste transduction pathway of sweet, bitter and umami tastes the gustatory system. ITP3 channels allow the flow of Calcium out of the endoplasmic reticulum in response to IP3. Calcium cations result in the activation of TRPM5 which leads to a depolarisation generating potential and an action potential.

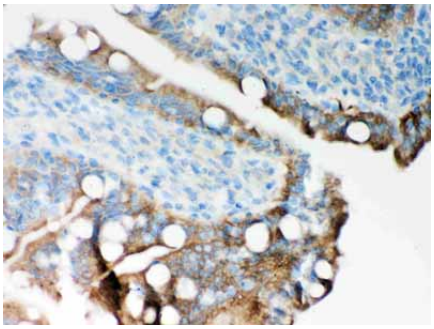
Images

Anti- ITPR3 Picoband antibody, ABO12118, Western blottingAll lanes: Anti ITPR3 (ABO12118) at 0.5ug/mlLane 1: HELA Whole Cell Lysate at 40ugLane 2: SW620 Whole Cell Lysate at 40ugPredicted bind size: 304KDObserved bind size: 304KD

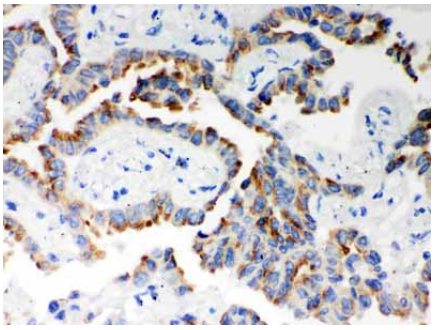




Anti- ITPR3 Picoband antibody, ABO12118, IHC(P)IHC(P): Mouse Intestine Tissue



Anti- ITPR3 Picoband antibody, ABO12118, IHC(P)IHC(P): Rat Intestine Tissue



Anti- ITPR3 Picoband antibody, ABO12118, IHC(P)IHC(P): Human Lung Cancer Tissue