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# ITPR3 Rabbit pAb

Catalog # AP97857

## Product Information

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| **Application** | IHC-P, IHC-F, IF |
| **Primary Accession** | Q14573 |
| **Other Accession** | Q14573 |
| **Reactivity** | Mouse |
| **Predicted** | Rat, Human, Rabbit, Chicken, Dog, Horse |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 304106 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human ITPR3 |
| **Epitope Specificity** | 21-120/2671 |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **SIMILARITY** | Belongs to the InsP3 receptor family.Contains 5 MIR domains. |
| **SUBUNIT** | Homotetramer. Interacts with SIGMAR1, PML, AKT1, TRPC1, TRPC3 and TRPC4 (By similarity). Interacts with CABP1. Interacts with TMBIM4/LFG4. |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | Inositol 1,4,5-triphosphate (IP3) functions as a second messenger for a myriad of extracellular stimuli including hormones, growth factors and neurotransmitters. Receptor tyrosine kinases indirectly increase the intracellular levels of IP3 through the activation of phospholipases such as phospholipase C (PLC), which convert phosphatidylinositol-4,5 bisphosphate into IP3 and diacylglycerol (DAG). The inositol 1,4,5-triphosphate receptor, IP3R, acts as an inositol triphosphate (IP3)-gated calcium release channel in a variety of cell types. Three IP3 receptor subtypes have been described and are designated IP3R-I, IP3R-II and IP3R-III. IP3R-I is the predominant IP3R subtype expressed in neuronal tissues and the central nervous system, but is also expressed at high levels in the liver. |

## Additional Information

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| **Gene ID** | 3710 |
| **Other Names** | CMT1J; IMD132; IMD133; IP3R; IP3R-3; IP3R3; ITPR3_HUMAN; ITPR3; IP3 receptor isoform 3 (IP3R-3 \| InsP3R3); Type 3 inositol 1, 4, 5-trisphosphate receptor (Type 3 InsP3 receptor); inositol 1, 4, 5-trisphosphate receptor type 3; inositol 1, 4, 5-triphosphate receptor, type 3; inositol 1, 4, 5-trisphosphate receptor, type 3 |
| **Dilution** | IHC-P=1:100-500,IHC-F=1:100-500,IF=1:50-200 |

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| **Storage** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| **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. |

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