Product Name: IP3R-I (phospho Ser1764) Rabbit Polyclonal Antibody
Catalog #: APRab04861

Summary

Production Name	IP3R-I (phospho Ser1764) Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	WB,IHC,ELISA
Reactivity	Human,Mouse,Rat

Performance

Conjugation	Unconjugated
Modification	Phospho Antibody
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	ITPR1
Alternative Names	ITPR1; INSP3R1; 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
Gene ID	3708.0
SwissProt ID	Q14643.The antiserum was produced against synthesized peptide derived from human IP3R1 around the phosphorylation site of Ser1764. AA range:1730-1779

Application

Dilution Ratio	WB 1:500-2000 ,IHC 1:100 - 1:300. ELISA: 1:5000..
Molecular Weight	

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Background

This gene encodes an intracellular receptor for inositol 1,4,5-trisphosphate. Upon stimulation by inositol 1,4,5-trisphosphate, this receptor mediates calcium release from the endoplasmic reticulum. Mutations in this gene cause spinocerebellar ataxia type 15, a disease associated with an heterogeneous group of cerebellar disorders. Multiple transcript variants have been identified for this gene. [provided by RefSeq, Nov 2009],alternative products:There is a combination of three alternatively spliced domains at site SI, SIII and site SII (A and C). Experimental confirmation may be lacking for some isoforms,disease:Defects in ITPR1 are the cause of spinocerebellar ataxia type 15 (SCA15) (SCA15) [MIM:606658]. Spinocerebellar ataxia is a clinically and genetically heterogeneous group of cerebellar disorders. Patients show progressive incoordination of gait and often poor coordination of hands, speech and eye movements, due to degeneration of the cerebellum with variable involvement of the brainstem and spinal cord. SCA15 is an autosomal dominant cerebellar ataxia (ADCA). It is very slow progressing form with a wide range of onset, ranging from childhood to adult. Most patients remain ambulatory.,domain: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.,function:Intracellular channel that mediates calcium release from the endoplasmic reticulum following stimulation by inositol 1,4,5-trisphosphate.,miscellaneous:Calcium appears to inhibit ligand binding to the receptor, most probably by interacting with a distinct calcium-binding protein which then inhibits the receptor.,PTM:Phosphorylated by cAMP kinase. Phosphorylation prevents the ligand-induced opening of the calcium channels.,PTM:Phosphorylated on tyrosine residues.,similarity:Belongs to the InsP3 receptor family.,similarity:Contains 5 MIR domains.,subunit: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 AHCYL1 (By similarity). Interacts with MRVI1.,tissue specificity:Widely expressed.,

Research Area

Calcium;Phosphatidylinositol signaling system;Oocyte meiosis;Vascular smooth muscle contraction;Gap junction;Long-term potentiation;Long-term depression;GnRH;Alzheimer's disease;Huntington's disease;

Image Data

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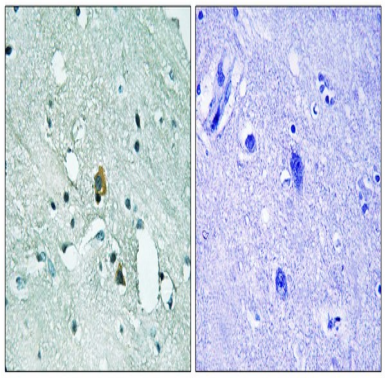
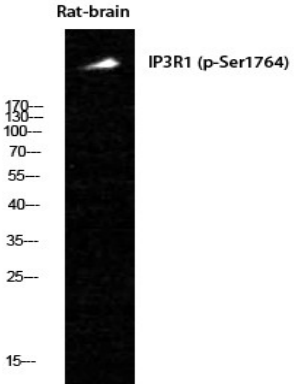


Immunohistochemistry analysis of paraffin-embedded human brain, using IP3R1 (Phospho-Ser1764) Antibody. The picture on the right is blocked with the phospho peptide.



Western Blot analysis of Rat-brain cells using Phospho-IP3R-I (S1764) Polyclonal Antibody

Note

For research use only.