

IP3R-II (C-20): sc-7278

BACKGROUND

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.

CHROMOSOMAL LOCATION

Genetic locus: ITPR2 (human) mapping to 12p12.1; Itpr2 (mouse) mapping to 6 G3.

SOURCE

IP3R-II (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of IP3R-II of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7278 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IP3R-II (C-20) is recommended for detection of IP3R-II of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

IP3R-II (C-20) is also recommended for detection of IP3R-II in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for IP3R-II siRNA (h): sc-35698, IP3R-II siRNA (m): sc-35699, IP3R-II shRNA Plasmid (h): sc-35698-SH, IP3R-II shRNA Plasmid (m): sc-35699-SH, IP3R-II shRNA (h) Lentiviral Particles: sc-35698-V and IP3R-II shRNA (m) Lentiviral Particles: sc-35699-V.

Molecular Weight of IP3R-II: 260 kDa.

Positive Controls: A-10 cell lysate: sc-3806.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

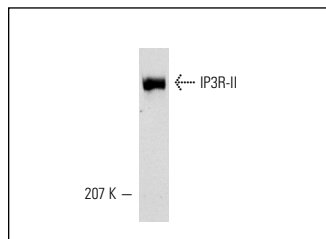
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

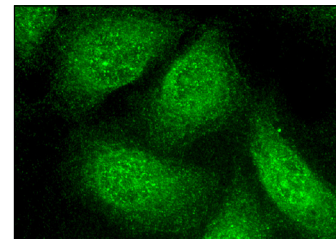
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



IP3R-II (C-20): sc-7278. Western blot analysis of IP3R-II expression in A-10 whole cell lysate.



IP3R-II (C-20): sc-7278. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

- Joseph, S.K., et al. 2000. Factors determining the composition of inositol triphosphate receptor heter-oligomers expressed in COS cells. *J. Biol. Chem.* 275: 16084-16090.
- Rosado, J., et al. 2000. Coupling between inositol 1,4,5-trisphosphate receptors and human transient receptor potential channel 1 when intracellular Ca²⁺ stores are depleted. *Biochem. J.* 350: 631-635.
- Galeotti, N., et al. 2007. Knockdown of the type 2 and 3 inositol 1,4,5-trisphosphate receptors suppresses muscarinic antinociception in mice. *Neuroscience* 149: 409-420.
- Tong, Q., et al. 2008. TRPC3 is the erythropoietin-regulated calcium channel in human erythroid cells. *J. Biol. Chem.* 283: 10385-10395.
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- Galeotti N., et al. 2008. An antidepressant behaviour in mice carrying a gene-specific InsP3R1, InsP3R2 and InsP3R3 protein knockdown. *Neuropharmacology* 55: 1156-1164.
- Nalaskowski, M.M., et al. 2011. Human inositol 1,4,5-trisphosphate 3-kinase isoform B (IP3KB) is a nucleocytoplasmic shuttling protein specifically enriched at cortical actin filaments and at invaginations of the nuclear envelope. *J. Biol. Chem.* 286: 4500-4510.
- Touw, K., et al. 2012. Altered calcium signaling in colonic smooth muscle of type 1 diabetic mice. *Am. J. Physiol. Gastrointest. Liver Physiol.* 302: G66-G76.

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Try **IP3R-II (A-5): sc-398434**, our highly recommended monoclonal alternative to IP3R-II (C-20).