**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.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: ITPR2 (human) mapping to 12p12.1; Itp2r (mouse) mapping to 6 G3.

**SOURCE**

IP3R-II (A-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2666-2695 at the C-terminus of IP3R-II of human origin.

**PRODUCT**

Each vial contains 200 µg IgGκ kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398434 P, (100 µg peptide in 0.5 ml PBS containing <0.1% sodium azide and 0.2% stabilizer protein).

**APPLICATIONS**

IP3R-II (A-5) is recommended for detection of IP3R-II of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 (A-5) 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: Hep G2 cell lysate: sc-2227, Jurkat whole cell lysate: sc-2204 or rat thymus extract: sc-2401.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker); sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blockning Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

**DATA**

IP3R-II (A-5): sc-398434. Western blot analysis of IP3R-II expression in Hep G2 (A), Jurkat (B) and NIH/3T3 (C) whole cell lysates and rat thymus tissue extract (D).

IP3R-II (A-5): sc-398434. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization (A), Immunofluorescence staining of formalin-fixed HeLa cells showing cytoplasmic and membrane localization (B).

**STORAGE**

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

**RESEARCH USE**

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