SANTA CRUZ BIOTECHNOLOGY, INC.

IMPA1 (H-85): sc-99227

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

IMPA1, also known as Myo-inositol monophosphatase 1, is responsible for the procurement of inositol that is required for synthesis of phosphatidylinositol and polyphosphoinositides. IMPA1 exists as a homodimer and has been identified as the pharmacological target for lithium action in the brain. IMPA1 is the principal enzyme of the phosphatidyl inositol signaling pathway, and inhibition of inositol monophosphatase hydrolysis may underlie the anti-manic and anti-depressant actions of Li^+. Studies indicate that a variation in the 277 codon coding region of the IMPA1 gene has not been observed in manic-depressive patients, therefore suggesting that polymorphisms or mutations in the noncoding regions of this gene may influence the lithium response in psychiatric patients.

REFERENCES

1. McAllister, G., et al. 1992. cDNA cloning of human and rat brain Myo-inositol monophosphatase. Expression and characterization of the human recombinant enzyme. Biochem. J. 284: 749-754.
2. Klein, P.S., et al. 1996. A molecular mechanism for the effect of lithium on development. Proc. Natl. Acad. Sci. USA 93: 8455-8459.

CHROMOSOMAL LOCATION

Genetic locus: IMPA1 (human) mapping to 8q21.13; Impa1 (mouse) mapping to 3 A1.

SOURCE

IMPA1 (H-85) is a rabbit polyclonal antibody raised against amino acids 1-85 mapping at the N-terminus of IMPA1 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.

APPLICATIONS

IMPA1 (H-85) is recommended for detection of Myo-inositol monophosphatase 1 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).

IMPA1 (H-85) is also recommended for detection of Myo-inositol monophosphatase 1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for IMPA1 siRNA (h): sc-61115, IMPA1 siRNA (m): sc-61116, IMPA1 shRNA Plasmid (h): sc-61115-SH, IMPA1 shRNA Plasmid (m): sc-61116-SH, IMPA1 shRNA (h) Lentiviral Particles: sc-61115-V and IMPA1 shRNA (m) Lentiviral Particles: sc-61116-V.

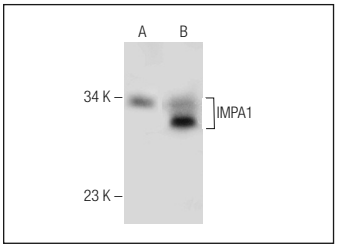
Molecular Weight of IMPA1: 29 kDa.

Positive Controls: PC-3 cell lysate: sc-2220 or IMR-32 cell lysate: sc-2409.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking 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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



IMPA1 (H-85): sc-99227. Western blot analysis of IMPA1 expression in PC-3 (**A**) and IMR-32 (**B**) whole cell lysates.

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.

PROTOCOLS

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