**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 phosphatidylinositol 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**


**Chromosomal Location**

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

**Source**

IMPA1 (H-7) is a mouse monoclonal antibody raised against amino acids 1-85 mapping at the N-terminus of IMPA1 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.

**Applications**

IMPA1 (H-7) is recommended for detection of IMPA1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

**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 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**Data**

![Immunoperoxidase staining of glandular formalin-fixed, paraffin-embedded human thyroid tissue sections showing nuclear and cytoplasmic staining of glandular cells](image)

**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 for detailed protocols and support products.