IMP1A1 (H-7): sc-374234

**BACKGROUND**
IMP1A1, also known as Myo-inositol monophosphatase 1, is responsible for the procurement of inositol that is required for synthesis of phosphatidylinositol and polyphosphoinositides. IMP1A1 exists as a homodimer and has been identified as the pharmacological target for lithium action in the brain. IMP1A1 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 IMP1A1 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**

**SOURCE**
IMP1A1 (H-7) is a mouse monoclonal antibody raised against amino acids 1-85 mapping at the N-terminus of IMP1A1 of human origin.

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

IMP1A1 (H-7) is available conjugated to agarose (sc-374234 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374234 HRP), 200 µg/ml, for WB, HICIP and ELISA; to either phycoerythrin (sc-374234 PE), fluorescein (sc-374234 FITC), Alexa Fluor® 488 (sc-374234 AF488), Alexa Fluor® 546 (sc-374234 AF546), Alexa Fluor® 594 (sc-374234 AF594) or Alexa Fluor® 647 (sc-374234 AF647), 200 µg/ml, for WB (RGB), IF, HICIP and FCM; and to either Alexa Fluor® 680 (sc-374234 AF680) or Alexa Fluor® 790 (sc-374234 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**
IMP1A1 (H-7) is recommended for detection of IMP1A1 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).

Suitable for use as control antibody for IMP1A1 siRNA (h): sc-61115, IMP1A1 siRNA (m): sc-61116, IMP1A1 shRNA Plasmid (h): sc-61115-SH, IMP1A1 shRNA Plasmid (m): sc-61115-SH, IMP1A1 shRNA (h) Lentiviral Particles: sc-61115-V and IMP1A1 shRNA (m) Lentiviral Particles: sc-61116-V.

Molecular Weight of IMP1A1: 29 kDa.

**RECOMMENDED SUPPORT REAGENTS**
To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz™ Blocking Reagent: sc-516214 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**
IMP1A1 (H-7): sc-374234. Western blot analysis of IMP1A1 expression in IMR-32 (A), Neuro-2A (B) and C6 (C) whole cell lysates and human cerebral cortex tissue extract (D).

**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.