SANTA CRUZ BIOTECHNOLOGY, INC.

Proteassemblin (B-1): sc-393267

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The Power to Question

BACKGROUND

Proteassemblin, also known as POMP (proteasome maturation protein), UMP1 or Voltage-gated potassium channel β subunit 4.1, is an endoplasmic reticulum (ER) associated protein that functions as a molecular chaperone required for proteasome and immunoproteasome assembly. Essential for cell viability and induced by IFN-γ, Proteassemblin associates with preproteasomes and specifically binds to Proteasome 20S β1i, β1, β5, β6 and β7 subunits. Proteassemblin is responsible for mediating the binding of the 20S preproteasome to the ER membrane and is required for incorporation of the β subunits into the 20S proteasome. Proteassemblin is the human homolog of the yeast Ump1 protein. Unlike Ump1, which becomes incorporated into the proteasome, Proteassemblin is degraded upon maturation of the newly formed proteasome.

REFERENCES

1. Griffin, T.A., et al. 2000. Identification of Proteassemblin, a mammalian homologue of the yeast protein, Ump1p, that is required for normal proteasome assembly. Mol. Cell Biol. Res. Commun. 3: 212-217.
2. Meiners, S., et al. 2003. Inhibition of proteasome activity induces concerted expression of proteasome genes and *de novo* formation of mammalian proteasomes. J. Biol. Chem. 278: 21517-21525.
3. Jayarapu, K. and Griffin, T.A. 2004. Protein-protein interactions among human 20S proteasome subunits and Proteassemblin. Biochem. Biophys. Res. Commun. 314: 523-528.

CHROMOSOMAL LOCATION

Genetic locus: POMP (human) mapping to 13q12.3; Pomp (mouse) mapping to 5 G3.

SOURCE

Proteassemblin (B-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 38-63 within an internal region of Proteassemblin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Proteassemblin (B-1) is available conjugated to agarose (sc-393267 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393267 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393267 PE), fluorescein (sc-393267 FITC), Alexa Fluor® 488 (sc-393267 AF488), Alexa Fluor® 546 (sc-393267 AF546), Alexa Fluor® 594 (sc-393267 AF594) or Alexa Fluor® 647 (sc-393267 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393267 AF680) or Alexa Fluor® 790 (sc-393267 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393267 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Proteassemblin (B-1) is recommended for detection of Proteassemblin 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).

Proteassemblin (B-1) is also recommended for detection of Proteassemblin in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Proteassemblin siRNA (h): sc-62890, Proteassemblin siRNA (m): sc-62891, Proteassemblin shRNA Plasmid (h): sc-62890-SH, Proteassemblin shRNA Plasmid (m): sc-62891-SH, Proteassemblin shRNA (h) Lentiviral Particles: sc-62890-V and Proteassemblin shRNA (m) Lentiviral Particles: sc-62891-V.

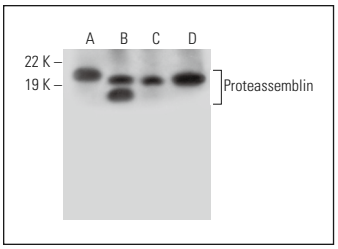
Molecular Weight of Proteassemblin: 16 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, SW480 cell lysate: sc-2219 or HeLa whole cell lysate: sc-2200.

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, 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). 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



Proteassemblin (B-1): sc-393267. Western blot analysis of Proteassemblin expression in HL-60 (**A**), SW480 (**B**), HeLa (**C**) and Jurkat (**D**) 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.