

prefoldin 5 (B-11): sc-271150

BACKGROUND

Molecular chaperones are proteins that assist in the correct folding of other proteins in the crowded molecular environment that exists in living cells. Within this class of proteins, a key role is played by chaperonins, multisubunit toroidal (i.e. doughnut-shaped) assemblies that undergo major ATP-dependent conformational changes as part of the mechanism of facilitated folding. Prefoldin is a heterohexameric chaperone protein which has the ability to capture unfolded Actin. Six prefoldin polypeptides, prefoldin 1-6, have been identified. Prefoldin 1 is a 122 amino acid protein that binds specifically to cytosolic chaperonin (c-cpn) and transfers target proteins to it. Prefoldin 3 (VBP1 or VHL binding protein-1) forms complexes with VHL and is translocated from perinuclear granules to the nucleus or cytoplasm. Prefoldin 4 is a possible transcription factor. Prefoldin 5 (c-Myc-binding protein Mm-1, Myc modulator 1 or MM-1) is a c-Myc binding protein.

REFERENCES

1. Tsuchiya, H., et al. 1996. Identification of a novel protein (VBP-1) binding to the von Hippel-Lindau (VHL) tumor suppressor gene product. *Cancer Res.* 56: 2881-2885.
2. Brinke, A., et al. 1997. Characterization of the gene (VBP1) and transcript for the von Hippel-Lindau binding protein and isolation of the highly conserved murine homologue. *Genomics* 45: 105-112.
3. Mori, K., et al. 1998. MM-1, a novel c-Myc-associating protein that represses transcriptional activity of c-Myc. *J. Biol. Chem.* 273: 29794-29800.
4. Vainberg, I.E., et al. 1998. Prefoldin, a chaperone that delivers unfolded proteins to cytosolic chaperonin. *Cell* 93: 863-873.
5. Fujioka, Y., et al. 2001. MM-1, a c-Myc-binding protein, is a candidate for a tumor suppressor in leukemia/lymphoma and tongue cancer. *J. Biol. Chem.* 276: 45137-45144.

CHROMOSOMAL LOCATION

Genetic locus: PFDN5 (human) mapping to 12q13.13; Pfdn5 (mouse) mapping to 15 F3.

SOURCE

prefoldin 5 (B-11) is a mouse monoclonal antibody raised against amino acids 1-154 representing full length prefoldin 5 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

prefoldin 5 (B-11) is available conjugated to agarose (sc-271150 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271150 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271150 PE), fluorescein (sc-271150 FITC), Alexa Fluor[®] 488 (sc-271150 AF488), Alexa Fluor[®] 546 (sc-271150 AF546), Alexa Fluor[®] 594 (sc-271150 AF594) or Alexa Fluor[®] 647 (sc-271150 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271150 AF680) or Alexa Fluor[®] 790 (sc-271150 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

prefoldin 5 (B-11) is recommended for detection of prefoldin 5 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).

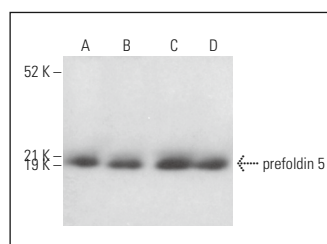
Suitable for use as control antibody for prefoldin 5 siRNA (h): sc-40876, prefoldin 5 siRNA (m): sc-40877, prefoldin 5 shRNA Plasmid (h): sc-40876-SH, prefoldin 5 shRNA Plasmid (m): sc-40877-SH, prefoldin 5 shRNA (h) Lentiviral Particles: sc-40876-V and prefoldin 5 shRNA (m) Lentiviral Particles: sc-40877-V.

Molecular Weight (predicted) of prefoldin 5: 17 kDa.

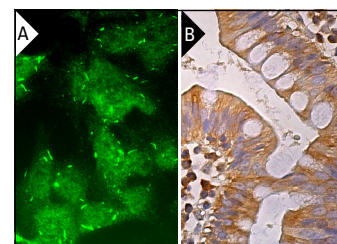
Molecular Weight (observed) of prefoldin 5: 15/21 kDa.

Positive Controls: PC-3 cell lysate: sc-2220, MIA PaCa-2 cell lysate: sc-2285 or L6 whole cell lysate: sc-364196.

DATA



prefoldin 5 (B-11): sc-271150. Western blot analysis of prefoldin 5 expression in PC-3 (A), MIA PaCa-2 (B), L6 (C) and RPE-J (D) whole cell lysates.



prefoldin 5 (B-11): sc-271150. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Payán-Bravo, L., et al. 2021. Human prefoldin modulates co-transcriptional pre-mRNA splicing. *Nucleic Acids Res.* 49: 6267-6280.

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.

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