

prefoldin 3 (D-5): sc-390524

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. Vainberg, I.E., et al. 1998. Prefoldin, a chaperone that delivers unfolded proteins to cytosolic chaperonin. *Cell* 93: 863-873.
4. LocusLink Report (LocusID: 604897). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: VBP1 (human) mapping to Xq28; Vbp1 (mouse) mapping to X A7.3.

SOURCE

prefoldin 3 (D-5) is a mouse monoclonal antibody raised against amino acids 1-92 mapping at the N-terminus of prefoldin 3 of human origin.

PRODUCT

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

prefoldin 3 (D-5) is available conjugated to agarose (sc-390524 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390524 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390524 PE), fluorescein (sc-390524 FITC), Alexa Fluor® 488 (sc-390524 AF488), Alexa Fluor® 546 (sc-390524 AF546), Alexa Fluor® 594 (sc-390524 AF594) or Alexa Fluor® 647 (sc-390524 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390524 AF680) or Alexa Fluor® 790 (sc-390524 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

prefoldin 3 (D-5) is recommended for detection of prefoldin 3 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).

Suitable for use as control antibody for prefoldin 3 siRNA (h): sc-40873, prefoldin 3 siRNA (m): sc-40874, prefoldin 3 shRNA Plasmid (h): sc-40873-SH, prefoldin 3 shRNA Plasmid (m): sc-40874-SH, prefoldin 3 shRNA (h) Lentiviral Particles: sc-40873-V and prefoldin 3 shRNA (m) Lentiviral Particles: sc-40874-V.

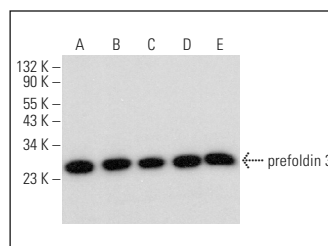
Molecular Weight of prefoldin 3: 23 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, Hep G2 cell lysate: sc-2227 or NIH/3T3 whole cell lysate: sc-2210.

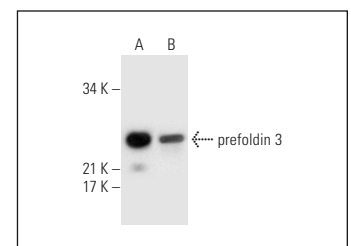
RECOMMENDED SUPPORT REAGENTS

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



prefoldin 3 (D-5): sc-390524. Western blot analysis of prefoldin 3 expression in U-698-M (A), NIH/3T3 (B), RAW 264.7 (C), K-562 (D) and MDA-MB-231 (E) whole cell lysates.



prefoldin 3 (D-5): sc-390524. Western blot analysis of prefoldin 3 expression in HL-60 (A) and Hep G2 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Chesnel, F., et al. 2020. The prefoldin complex stabilizes the von Hippel-Lindau protein against aggregation and degradation. *PLoS Genet.* 16: e1009183.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.