SANTA CRUZ BIOTECHNOLOGY, INC.

prefoldin 5 (m): 293T Lysate: sc-122756

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, multi-subunit 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., Iseda, T. and Hino, O. 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., Green, P.M. and Giannelli, F. 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., Maeda, Y., Kitaura, H., Taira, T., Iguchi-Ariga, S.M. and Ariga, H. 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., Lewis, S.A., Rommelaere, H., Ampe, C., Vandekerckhove, J., Klein, H.L. and Cowan, N.J. 1998. Prefoldin, a chaperone that delivers unfolded proteins to cytosolic chaperonin. Cell 93: 863-873.
5. Satou, A., Taira, T., Iguchi-Ariga, S.M. and Ariga, H. 2001. A novel transrepression pathway of c-Myc. Recruitment of a transcriptional corepressor complex to c-Myc by MM-1, a c-Myc-binding protein. J. Biol. Chem. 276: 46562-46567.
6. Fujioka, Y., Taira, T., Maeda, Y., Tanaka, S., Nishihara, H., Iguchi-Ariga, S.M., Nagashima, K. and Ariga, H. 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.
7. Hagio, Y., Kimura, Y., Taira, T., Fujioka, Y., Iguchi-Ariga, S.M. and Ariga, H. 2006. Distinct localizations and repression activities of MM-1 isoforms toward c-Myc. J. Cell. Biochem. 97: 145-155.
8. Kimura, Y., Nagao, A., Fujioka, Y., Satou, A., Taira, T., Iguchi-Ariga, S.M. and Ariga, H. 2007. MM-1 facilitates degradation of c-Myc by recruiting proteasome and a novel ubiquitin E3 ligase. Int. J. Oncol. 31: 829-836.
9. Yoshida, T., Kitaura, H., Hagio, Y., Sato, T., Iguchi-Ariga, S.M. and Ariga, H. 2008. Negative regulation of the Wnt signal by MM-1 through inhibiting expression of the wnt4 gene. Exp. Cell Res. 314: 1217-1228.

CHROMOSOMAL LOCATION

Genetic locus: Pfdn5 (mouse) mapping to 15 F3.

PRODUCT

prefoldin 5 (m): 293T Lysate represents a lysate of mouse prefoldin 5 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

prefoldin 5 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive prefoldin 5 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.