UNC45A (h): 293T Lysate: sc-115724



The Power to Question

BACKGROUND

UNC45A (UNC-45 homolog A), also known as SMAP1 (smooth muscle cell-associated protein 1) or GCUNC45, is a 944 amino acid protein that localizes to the perinuclear region of the cytoplasm and contains three TPR repeats. Expressed in spinal cord, bone marrow, peripheral blood leukocytes, trachea, stomach and adrenal gland, UNCA45A functions as a chaperone for HSP 90, effectively facilitating the association of HSP 90 with PR (progesterone receptor). Additionally, UNC45A is thought to be necessary for proper folding of Myosin and is required for normal myotube formation during muscle cell development, thereby playing an important role in muscle formation. Overexpression of UNC45A is associated with rapid cell proliferation and motility, especially that observed in ovarian cancer, suggesting a role for UNC45A in tumorigenesis. Multiple isoforms of UNC45A exist due to alternative splicing events.

REFERENCES

- 1. Price, M.G., Landsverk, M.L., Barral, J.M. and Epstein, H.F. 2002. Two mammalian UNC45 isoforms are related to distinct cytoskeletal and muscle-specific functions. J. Cell Sci. 115: 4013-4023.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611219. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Chadli, A., Graham, J.D., Abel, M.G., Jackson, T.A., Gordon, D.F., Wood, W.M., Felts, S.J., Horwitz, K.B. and Toft, D. 2006. GCUNC45 is a novel regulator for the progesterone receptor/HSP 90 chaperoning pathway. Mol. Cell. Biol. 26: 1722-1730.
- Bazzaro, M., Santillan, A., Lin, Z., Tang, T., Lee, M.K., Bristow, R.E., Shih, I.M. and Roden, R.B. 2007. Myosin II cochaperone general cell UNC45 overexpression is associated with ovarian cancer, rapid proliferation, and motility. Am. J. Pathol. 171: 1640-1649.
- 5. Chadli, A., Bruinsma, E.S., Stensgard, B. and Toft, D. 2008. Analysis of HSP 90 cochaperone interactions reveals a novel mechanism for TPR protein recognition. Biochemistry 47: 2850-2857.
- Anderson, M.J., Pham, V.N., Vogel, A.M., Weinstein, B.M. and Roman, B.L. 2008. Loss of UNC45A precipitates arteriovenous shunting in the aortic arches. Dev. Biol. 318: 258-267.
- 7. Chadli, A., Felts, S.J. and Toft, D.O. 2008. GCUNC45 is the first HSP 90 cochaperone to show α/β isoform specificity. J. Biol. Chem. 283: 9509-9512.
- Liu, L., Srikakulam, R. and Winkelmann, D.A. 2008. UNC45 activates HSP 90-dependent folding of the myosin motor domain. J. Biol. Chem. 283: 13185-13193.

CHROMOSOMAL LOCATION

Genetic locus: UNC45A (human) mapping to 15q26.1.

PRODUCT

UNC45A (h): 293T Lysate represents a lysate of human UNC45A transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

UNC45A (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive UNC45A antibodies. Recommended use: 10-20 µl per lane.

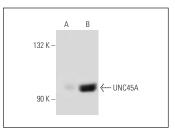
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

UNC45A (AbS1): sc-101493 is recommended as a positive control antibody for Western Blot analysis of enhanced human UNC45A expression in UNC45A transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG κ BP-HRP: sc-516102 or m-lgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



UNC45A (AbS1): sc-101493. Western blot analysis of UNC45A expression in non-transfected: sc-117752 (A) and human UNC45A transfected: sc-115724 (B) 293T whole cell Ivsates.

STORAGE

Store at -20 $^{\circ}$ 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.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com