

UNC45A (AbS1): sc-101493

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 3 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. Over-expression 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

- Price, M.G., et al. 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., et al. 2006. GCUNC45 is a novel regulator for the progesterone receptor/HSP 90 chaperoning pathway. *Mol. Cell. Biol.* 26: 1722-1730.
- Bazzaro, M., et al. 2007. Myosin II cochaperone general cell UNC45 over-expression is associated with ovarian cancer, rapid proliferation, and motility. *Am. J. Pathol.* 171: 1640-1649.

CHROMOSOMAL LOCATION

Genetic locus: UNC45A (human) mapping to 15q26.1; Unc45a (mouse) mapping to 7 D3.

SOURCE

UNC45A (AbS1) is a mouse monoclonal antibody raised against UNC45A 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.

UNC45A (AbS1) is available conjugated to agarose (sc-101493 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-101493 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-101493 PE), fluorescein (sc-101493 FITC), Alexa Fluor® 488 (sc-101493 AF488), Alexa Fluor® 546 (sc-101493 AF546), Alexa Fluor® 594 (sc-101493 AF594) or Alexa Fluor® 647 (sc-101493 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-101493 AF680) or Alexa Fluor® 790 (sc-101493 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

UNC45A (AbS1) is recommended for detection of UNC45A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for UNC45A siRNA (h): sc-90291, UNC45A siRNA (m): sc-154919, UNC45A shRNA Plasmid (h): sc-90291-SH, UNC45A shRNA Plasmid (m): sc-154919-SH, UNC45A shRNA (h) Lentiviral Particles: sc-90291-V and UNC45A shRNA (m) Lentiviral Particles: sc-154919-V.

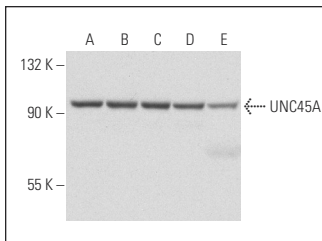
Molecular Weight of UNC45A: 103 kDa.

Positive Controls: UNC45A (h): 293T Lysate: sc-115724, Jurkat whole cell lysate: sc-2204 or SK-N-SH cell lysate: sc-2410.

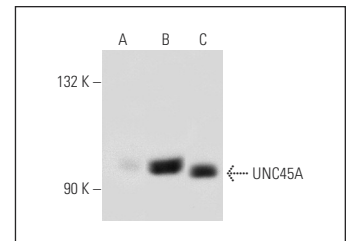
RECOMMENDED SUPPORT REAGENTS

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



UNC45A (AbS1): sc-101493. Western blot analysis of UNC45A expression in HeLa (A), Jurkat (B), K-562 (C), and Ramos (D) whole cell lysates and human platelet extract (E).



UNC45A (AbS1): sc-101493. Western blot analysis of UNC45A expression in non-transfected 293T: sc-117752 (A), human UNC45A transfected 293T: sc-115724 (B) and SK-N-SH (C) 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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