

utrophin (A-7): sc-365955

BACKGROUND

Dystrophin and utrophin are related structural, Actin-binding proteins that are involved in anchoring the cytoskeleton to the plasma membrane. Dystrophin is the protein product of the Duchenne/Becker muscular dystrophy gene. Dystrophin expression is found in muscle and brain tissues, where it is localized to the inner surface of the plasma membrane. It has been speculated that alternative splicing of the carboxy-terminus allows dystrophin to interact with a variety of proteins. Research has shown that the loss of dystrophin-associated proteins in Duchenne afflicted muscle is due to the absence of dystrophin rather than to muscle degradation and that the lack of dystrophin results in the loss of linkage between the cytoskeleton and the extracellular matrix. Evidence suggests that the upregulation of utrophin can reduce the dystrophic pathology.

REFERENCES

1. Monaco, A.P. 1989. Dystrophin, the protein product of the Duchenne/Becker muscular dystrophy gene. *Trends Biochem. Sci.* 14: 412-415.
2. Voit, T., et al. 1991. Dystrophin as a diagnostic marker in Duchenne/Becker muscular dystrophy. Correlation of immunofluorescence and Western blot. *Neuropediatrics* 22: 152-162.
3. Ervasti, J.M. and Campbell, K.P. 1993. Dystrophin-associated glycoproteins: their possible roles in the pathogenesis of Duchenne muscular dystrophy. *Mol. Cell. Biol. Hum. Dis. Ser.* 3: 139-166.
4. Suzuki, A., et al. 1994. Molecular organization at the glycoprotein-complex-binding site of dystrophin. Three dystrophin-associated proteins bind directly to the carboxy-terminal portion of dystrophin. *Eur. J. Biochem.* 220: 283-292.
5. Winder, S.J., et al. 1995. Utrophin Actin binding domain: analysis of Actin binding and cellular targeting. *J. Cell Sci.* 108: 63-71.

CHROMOSOMAL LOCATION

Genetic locus: UTRN (human) mapping to 6q24.2.

SOURCE

utrophin (A-7) is a mouse monoclonal antibody raised against amino acids 801-1100 of utrophin 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.

utrophin (A-7) is available conjugated to agarose (sc-365955 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365955 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365955 PE), fluorescein (sc-365955 FITC), Alexa Fluor® 488 (sc-365955 AF488), Alexa Fluor® 546 (sc-365955 AF546), Alexa Fluor® 594 (sc-365955 AF594) or Alexa Fluor® 647 (sc-365955 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365955 AF680) or Alexa Fluor® 790 (sc-365955 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

utrophin (A-7) is recommended for detection of utrophin of 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 utrophin siRNA (h): sc-43494, utrophin shRNA Plasmid (h): sc-43494-SH and utrophin shRNA (h) Lentiviral Particles: sc-43494-V.

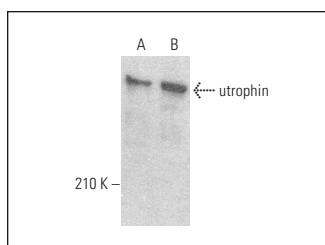
Molecular Weight of utrophin: 400 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

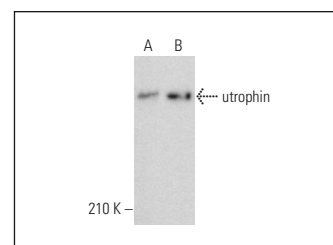
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (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 BPFITC: sc-516140 or m-IgGκ BPE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



utrophin (A-7): sc-365955. Western blot analysis of utrophin expression in HL-60 (A) and HeLa (B) whole cell lysates.



utrophin (A-7): sc-365955. Western blot analysis of utrophin expression in Caco-2 (A) and Hep G2 (B) 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.

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.