

utrophin (3B6): sc-33699

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.

CHROMOSOMAL LOCATION

Genetic locus: UTRN (human) mapping to 6q24.2; Utrn (mouse) mapping to 10 A1.

SOURCE

utrophin (3B6) is a mouse monoclonal antibody raised against amino acids 261-371 of utrophin of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

utrophin (3B6) is recommended for detection of utrophin 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for utrophin siRNA (h): sc-43494, utrophin siRNA (m): sc-43495, utrophin shRNA Plasmid (h): sc-43494-SH, utrophin shRNA Plasmid (m): sc-43495-SH, utrophin shRNA (h) Lentiviral Particles: sc-43494-V and utrophin shRNA (m) Lentiviral Particles: sc-43495-V.

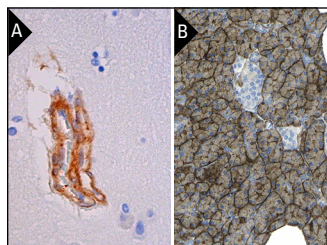
Molecular Weight of utrophin: 400 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, L6 whole cell lysate: sc-364196 or HL-60 whole cell lysate: sc-2209.

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



utrophin (3B6): sc-33699. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic and membrane staining of endothelial cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing membrane and cytoplasmic staining of exocrine glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

1. Cerecedo, D., et al. 2010. Distribution of dystrophin- and utrophin-associated protein complexes during activation of human neutrophils. *Exp. Hematol.* 38: 618-628.

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.