

utrophin (E-16): sc-21284

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 brain tissues, where it is localized to the inner surface of the plasma membrane. It is speculated that alternative splicing of the carboxy-terminus allows dystrophin to interact with a variety of proteins. It has been 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., et al. 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.
6. Rybakova, I.N., et al. 1996. A new model for the interaction of dystrophin with F-actin. *J. Cell Biol.* 135: 661-672.

CHROMOSOMAL LOCATION

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

SOURCE

utrophin (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of utrophin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-21284 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

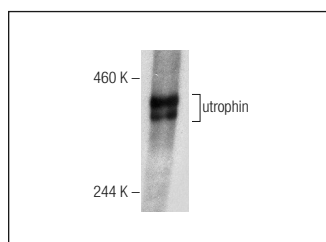
utrophin (E-16) is recommended for detection of utrophin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 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.

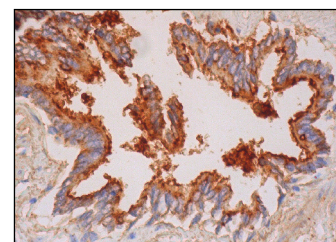
Molecular Weight of utrophin: 400 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Sol8 cell lysate: sc-2249 or L6 whole cell lysate: sc-364196.

DATA



utrophin (E-16): sc-21284. Western blot analysis of utrophin expression in L6 whole cell lysate.



utrophin (E-16): sc-21284. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bronchus tissue showing cytoplasmic staining of respiratory epithelial cells.

SELECT PRODUCT CITATIONS

1. Rosenberg, M.I., et al. 2006. MyoD inhibits Fstl1 and Utrn expression by inducing transcription of miR-206. *J. Cell Biol.* 175: 77-85.

RESEARCH USE

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

PROTOCOLS

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



Try **utrophin (8A4): sc-33700** or **utrophin (3B6): sc-33699**, our highly recommended monoclonal alternatives to utrophin (3B6): sc-33699. Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **utrophin (8A4): sc-33700**.