SANTA CRUZ BIOTECHNOLOGY, INC.

utrophin (55): sc-136116

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.
6. Rybakova, I.N., et al. 1996. A new model for the interaction of dystrophin with F-Actin. J. Cell Biol. 135: 661-672.
7. Tinsley, J.M., et al. 1996. Amelioration of the dystrophic phenotype of mdx mice using a truncated utrophin transgene. Nature 384: 349-353.

CHROMOSOMAL LOCATION

Genetic locus: Utrn (mouse) mapping to 10 A1.

SOURCE

utrophin (55) is a mouse monoclonal antibody raised against amino acids 768-874 of utrophin of mouse origin.

PRODUCT

Each vial contains 50 µg IgG_1 in 500 µl of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

STORAGE

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

APPLICATIONS

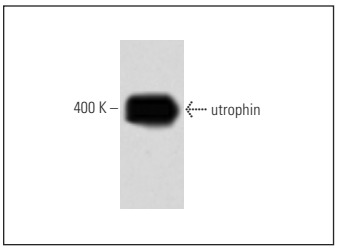
utrophin (55) is recommended for detection of utrophin of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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

Molecular Weight of utrophin: 400 kDa.

Positive Controls: mouse neonate tissue extract or Sol8 cell lysate: sc-2249.

DATA



utrophin (55): sc-136116. Western blot analysis of utrophin expression in mouse neonate tissue extract.

RESEARCH USE

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

PROTOCOLS

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

CONJUGATES

See **utrophin (8A4): sc-33700** for utrophin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.