

# utrophin (7F3): sc-81556

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

utrophin (7F3) is a mouse monoclonal antibody raised against a fusion protein containing amino acids 3104-3433 mapping to the C-terminus of utrophin of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

utrophin (7F3) is available conjugated to agarose (sc-81556 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-81556 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-81556 PE), fluorescein (sc-81556 FITC), Alexa Fluor® 488 (sc-81556 AF488), Alexa Fluor® 546 (sc-81556 AF546), Alexa Fluor® 594 (sc-81556 AF594) or Alexa Fluor® 647 (sc-81556 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-81556 AF680) or Alexa Fluor® 790 (sc-81556 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

utrophin (7F3) 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.

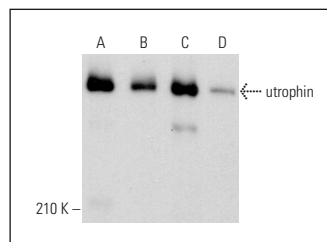
Molecular Weight of utrophin: 400 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, SJRH30 cell lysate: sc-2287 or Caco-2 cell lysate: sc-2262.

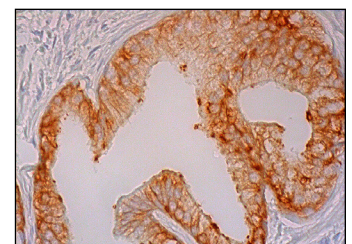
## RECOMMENDED SUPPORT REAGENTS

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 (7F3): sc-81556. Western blot analysis of utrophin expression in Hep G2 (A), HUV-EC-C (B), Caco-2 (C) and SJRH30 (D) whole cell lysates.



utrophin (7F3): sc-81556. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing cytoplasmic and membrane staining of glandular cells.

## 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.