

# β-Dystrobrevin (M-15): sc-13815

## BACKGROUND

Dystrobrevins are protein components of the dystrophin complex, whose disruption leads to Duchenne muscular dystrophy and related diseases. α-Dystrobrevin is a dystrophin-related and -associated protein that is involved in synapse maturation and is required for normal muscle function. α-Dystrobrevin is a component of the dystrophin glycoprotein complex. It is localized to the cytoplasmic side of the sarcolemma and is highly concentrated at the neuromuscular junctions in skeletal muscle. The insertion of 57 amino acids by alternative splicing accounts for the increase in molecular mass of α-Dystrobrevin 1 in skeletal and cardiac muscle compared with brain and lung. α-Dystrobrevin containing complexes are found in endothelial and smooth muscle cells, while β-Dystrobrevin containing complexes are present at the basal region of renal epithelial cells. Additionally, β-Dystrobrevin is found in neurons and is highly enriched in postsynaptic densities. Alternative splicing of α-Dystrobrevin produces γ-Dystrobrevin (isoform 5), δ-Dystrobrevin (isoform 7), ε-Dystrobrevin (isoform 6) and ζ-Dystrobrevin (isoform 8). Additional isoforms may also exist.

## REFERENCES

1. Blake, D.J., et al. 1998. β-Dystrobrevin, a member of the dystrophin-related protein family. *Proc. Natl. Acad. Sci. USA* 95: 241-246.
2. Blake, D.J., et al. 1999. Different dystrophin-like complexes are expressed in neurons and glia. *J. Cell Biol.* 147: 645-658.
3. Loh, N.Y., et al. 2000. Assembly of multiple Dystrobrevin-containing complexes in the kidney. *J. Cell Sci.* 113: 2715-2724.
4. Enigk, R.E., et al. 2001. Cellular and molecular properties of α-Dystrobrevin in skeletal muscle. *Front. Biosci.* 6: D53-D64.

## CHROMOSOMAL LOCATION

Genetic locus: DTNB (human) mapping to 2p23.3; Dtnb (mouse) mapping to 12 A1.1.

## SOURCE

β-Dystrobrevin (M-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of β-Dystrobrevin of mouse 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-13815 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.

## RESEARCH USE

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

## APPLICATIONS

β-Dystrobrevin (M-15) is recommended for detection of β-Dystrobrevin 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for β-Dystrobrevin siRNA (h): sc-43330, β-Dystrobrevin siRNA (m): sc-43331, β-Dystrobrevin shRNA Plasmid (h): sc-43330-SH, β-Dystrobrevin shRNA Plasmid (m): sc-43331-SH, β-Dystrobrevin shRNA (h) Lentiviral Particles: sc-43330-V and β-Dystrobrevin shRNA (m) Lentiviral Particles: sc-43331-V.

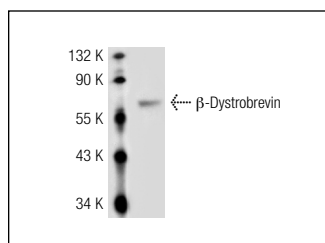
Molecular Weight of β-Dystrobrevin: 61 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



β-Dystrobrevin (M-15): sc-13815. Western blot analysis of β-Dystrobrevin expression in NIH/3T3 whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Pócsai, K., et al. 2010. Components of the basal lamina and dystrophin-dystroglycan complex in the neurointermediate lobe of rat pituitary gland: different localizations of β-dystroglycan, dystrobrevins, α1-syntrophin, and aquaporin-4. *J. Histochem. Cytochem.* 58: 463-479.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.