

α -Dystrobrevin (H-300): sc-33161

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 ω -Dystrobrevin (isoform 8). Additional isoforms may also exist.

REFERENCES

- Blake, D.J., et al. 1999. Different dystrophin-like complexes are expressed in neurons and glia. *J. Cell Biol.* 147: 645-658.
- Loh, N.Y., et al. 2000. Assembly of multiple Dystrobrevin-containing complexes in the kidney. *J. Cell Sci.* 113: 2715-2724.
- Enigk, R.E., et al. 2001. Cellular and molecular properties of α -Dystrobrevin in skeletal muscle. *Front. Biosci.* 6: D53-D64.
- Gieseler, K., et al. 2001. Molecular, genetic and physiological characterization of Dystrobrevin-like (dyb-1) mutants of *Caenorhabditis elegans*. *J. Mol. Biol.* 307: 107-117.
- Newey, S.E., et al. 2001. A novel mechanism for modulating synaptic gene expression: differential localization of α -Dystrobrevin transcripts in skeletal muscle. *Mol. Cell Neurosci.* 17: 127-140.
- Kulyte, A., et al. 2002. Characterization of human α -Dystrobrevin isoforms in HL-60 human promyelocytic leukemia cells undergoing granulocytic differentiation. *Mol. Biol. Cell* 13: 4195-4205.

CHROMOSOMAL LOCATION

Genetic locus: DTNA (human) mapping to 18q12.1; Dtna (mouse) mapping to 18 A2.

SOURCE

α -Dystrobrevin (H-300) is a rabbit polyclonal antibody raised against amino acids 301-600 (deletion 366-422) mapping within an internal region of α -Dystrobrevin of human origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

α -Dystrobrevin (H-300) is recommended for detection of all isoforms of α -Dystrobrevin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

α -Dystrobrevin (H-300) is also recommended for detection of all isoforms of α -Dystrobrevin in additional species, including equine, canine, bovine and avian.

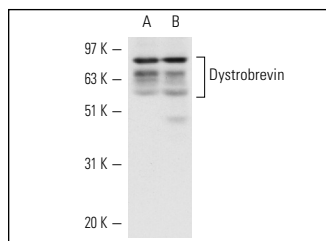
Suitable for use as control antibody for α -Dystrobrevin siRNA (h): sc-43321, α -Dystrobrevin siRNA (m): sc-43322, α -Dystrobrevin shRNA Plasmid (h): sc-43321-SH, α -Dystrobrevin shRNA Plasmid (m): sc-43322-SH, α -Dystrobrevin shRNA (h) Lentiviral Particles: sc-43321-V and α -Dystrobrevin shRNA (m) Lentiviral Particles: sc-43322-V.

Molecular Weight of α -Dystrobrevin non-muscle α type: 78 kDa.

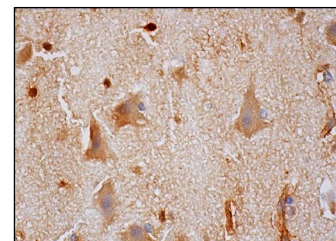
Molecular Weight of α -Dystrobrevin muscle α type: 94 kDa.

Positive Controls: rat brain extract: sc-2392, SK-N-SH cell lysate: sc-2410 or C2C12 whole cell lysate: sc-364188.

DATA



α -Dystrobrevin (H-300): sc-33161. Western blot analysis of α -Dystrobrevin expression in SK-N-SH (A) and C2C12 (B) whole cell lysates.



α -Dystrobrevin (H-300): sc-33161. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic staining of neuronal cells, cytoplasmic and nuclear staining of glial cells and cytoplasmic and membrane staining of endothelial cells.

STORAGE

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

PROTOCOLS

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