SANTA CRUZ BIOTECHNOLOGY, INC.

# β-dystroglycan (H-242): sc-28535

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Dystroglycan (DG) is a cell surface receptor for several extracellular matrix molecules including laminins, agrin and perlecan. Dystroglycan function is required for the formation of basement membranes in early development and the organization of Laminin on the cell surface. α-dystroglycan is a membrane-associated, extracellular glycoprotein that is anchored to the cell membrane by binding to the transmembrane glycoprotein β-dystroglycan to form an α/β-dystroglycan-complex. Additionally, dystroglycan is part of a multimolecular complex, where it associates with dystrophin, at the sarcolemma, to form the dystrophin-associated protein complex or with utrophin, at the neuromuscular junction, to form the utrophin-associated protein complex. Dystroglycan is also thought to participate in the clustering of nicotinic acetylcholine receptors at the neuromuscular junction.

## CHROMOSOMAL LOCATION

Genetic locus: DAG1 (human) mapping to 3p21.31; Dag1 (mouse) mapping to 9 F2.

## SOURCE

β-dystroglycan (H-242) is a rabbit polyclonal antibody raised against amino acids 831-895 mapping at the C-terminus of dystroglycan precursor 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.

## 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-dystroglycan (H-242) is recommended for detection of β-dystroglycan 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).

β-dystroglycan (H-242) is also recommended for detection of β-dystroglycan in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for α/β-dystroglycan siRNA (h): sc-43488, α/β-dystroglycan siRNA (m): sc-43489, α/β-dystroglycan shRNA Plasmid (h): sc-43488-SH, α/β-dystroglycan shRNA Plasmid (m): sc-43489-SH, α/β-dystroglycan shRNA (h) Lentiviral Particles: sc-43488-V and α/β-dystroglycan shRNA (m) Lentiviral Particles: sc-43489-V.

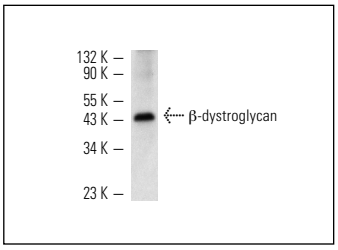
Molecular Weight of β-dystroglycan precursor: 97 kDa.

Molecular Weight of mature β-dystroglycan: 43 kDa.

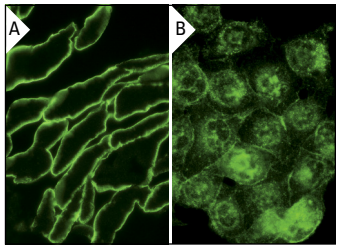
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA




β-dystroglycan (H-242): sc-28535. Western blot analysis of β-dystroglycan expression in C6 whole cell lysate.




β-dystroglycan (H-242): sc-28535. Immunofluorescence staining of normal mouse skin frozen section (**A**) and immunofluorescence staining of methanol-fixed HeLa cells (**B**) showing membrane localization.

## SELECT PRODUCT CITATIONS


1. Basco, D., et al. 2011. Absence of aquaporin-4 in skeletal muscle alters proteins involved in bioenergetic pathways and calcium handling. PLoS ONE 6: e19225.
2. Gokhin, D.S. and Fowler, V.M. 2011. Cytoplasmic γ-actin and tropomodulin isoforms link to the sarcoplasmic reticulum in skeletal muscle fibers. J. Cell Biol. 194: 105-120.
3. Filareto, A., et al. 2012. Engraftment of ES-derived myogenic progenitors in a severe mouse model of muscular dystrophy. J. Stem Cell Res. Ther. 10: S10-001.
4. van den Bergen, J.C., et al. 2013. Clinical characterisation of Becker muscular dystrophy patients predicts favourable outcome in exon-skipping therapy. J. Neurol. Neurosurg. Psychiatr. E-Published.
5. Chand, D., et al. 2013. C-terminal region of teneurin-1 co-localizes with the dystroglycan complex in adult mouse testes and regulates testicular size and testosterone production. Histochem. Cell Biol. E-published.