

β-dystroglycan (C-20): sc-16165

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 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of β-dystroglycan of human origin.

PRODUCT

Each vial contains 100 μg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16165 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

β-dystroglycan (C-20) is recommended for detection of precursor and mature 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 (C-20) is also recommended for detection of precursor and mature 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.

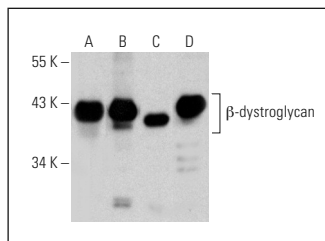
Molecular Weight of mature β-dystroglycan: 43 kDa.

Positive Controls: SK-BR-3 cell lysate: sc-2218, C6 whole cell lysate: sc-364373 or L6 whole cell lysate: sc-364196.

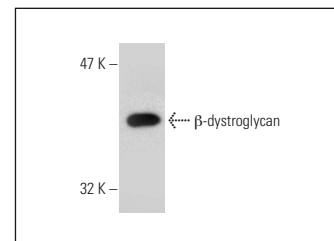
STORAGE

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

DATA



β-dystroglycan (C-20): sc-16165. Western blot analysis of β-dystroglycan expression in rat skeletal muscle tissue extract (A) and C6 (B), SK-BR-3 (C) and L6 (D) whole cell lysates.



β-dystroglycan (C-20): sc-16165. Western blot analysis of β-dystroglycan expression in MIA PaCa-2 whole cell lysate.

SELECT PRODUCT CITATIONS

- Ramirez-Sanchez, I., et al. 2004. Expression analysis of the SG-SSPN complex in smooth muscle and endothelial cells of human umbilical cord vessels. *J. Vasc. Res.* 42: 1-7.
- Blanco, G., et al. 2004. Molecular phenotyping of the mouse ky mutant reveals UCP1 upregulation at the neuromuscular junctions of dystrophic soleus muscle. *Neuromuscul. Disord.* 14: 217-228.
- Rice, K.M., et al. 2006. Age-related dystrophin-glycoprotein complex structure and function in the rat extensor digitorum longus and soleus muscle. *J. Gerontol. A, Biol. Sci. Med. Sci.* 61: 1119-1129.
- Kakarla, S.K. 2007. Age-related DGC structure and function in the F344/N X BN rat heart (Master's thesis). Theses Dissertations Capstones. E-published.
- González-Ramírez, R., et al. 2008. Nuclear and nuclear envelope localization of dystrophin Dp71 and dystrophin-associated proteins (DAPs) in the C2C12 muscle cells: DAPs nuclear localization is modulated during myogenesis. *J. Cell. Biochem.* 105: 735-745.
- Kakarla, S.K., et al. 2010. Possible molecular mechanisms underlying age-related cardiomyocyte apoptosis in the F344XBN rat heart. *J. Gerontol. A, Biol. Sci. Med. Sci.* 65: 147-155.

RESEARCH USE

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



Try **β-dystroglycan (A-9): sc-165999** or **β-dystroglycan (B-4): sc-165997**, our highly recommended monoclonal alternatives to β-dystroglycan (C-20).