

p- β -dystroglycan (pY892.27.1): sc-136456

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 α -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.

REFERENCES

1. Cote, P.D., et al. 1999. Chimaeric mice deficient in dystroglycans develop muscular dystrophy and have disrupted myoneural synapses. *Nat. Genet.* 23: 338-342.
2. Seifert, J., et al. 2000. Syntheses of α -dystroglycan derived glycosyl amino acids carrying a novel mannosyl serine/ threonine linkage. *Glycoconj. J.* 17: 407-423.
3. Henry, M.D., et al. 2001. Distinct roles for dystroglycan, β 1 Integrin and Perlecan in cell surface laminin organization. *J. Cell Sci.* 114: 1137-1144.
4. Masaki, T., et al. 2001. Expression of dystroglycan complex in satellite cells of dorsal root ganglia. *Acta Neuropathol.* 101: 174-178.

CHROMOSOMAL LOCATION

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

SOURCE

p- β -dystroglycan (pY892.27.1) is a mouse monoclonal antibody raised against a short amino acid sequence containing Tyr 892 phosphorylated β -dystroglycan of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p- β -dystroglycan (pY892.27.1) is available conjugated to agarose (sc-136456 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-136456 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-136456 PE), fluorescein (sc-136456 FITC), Alexa Fluor[®] 488 (sc-136456 AF488), Alexa Fluor[®] 594 (sc-136456 AF594) or Alexa Fluor[®] 647 (sc-136456 AF647), 200 μ g/ml, for IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-136456 AF680) or Alexa Fluor[®] 790 (sc-136456 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

p- β -dystroglycan (pY892.27.1) is recommended for detection of Tyr 892 phosphorylated β -dystroglycan of human origin and correspondingly Tyr 890 phosphorylated β -dystroglycan of mouse origin and the corresponding rat homolog 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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 p- β -dystroglycan precursor: 97 kDa.

Molecular Weight of p- β -dystroglycan mature truncated product: 43 kDa.

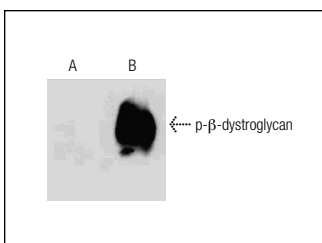
Molecular Weight of p- β -dystroglycan cleaved product: 30 kDa.

Positive Controls: HeLa + pervanadate cell lysate: sc-24688.

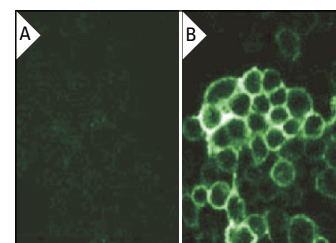
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Lambda Phosphatase: sc-200312A 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



p- β -dystroglycan (pY892.27.1): sc-136456. Western blot analysis of β -dystroglycan phosphorylation in untreated (A) and 1 mM pervanadate treated (B) HeLa whole cell lysates.



p- β -dystroglycan (pY892.27.1): sc-136456. Immunofluorescence staining of methanol-fixed untreated (A) and pervanadate-treated (B) HeLa cells showing cytoplasmic localization.

STORAGE

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

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