**β-dystroglycan (4F7): sc-33702**

### 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 (4F7) is a mouse monoclonal antibody raised against the C-terminus of β-dystroglycan of human origin.

### PRODUCT
Each vial contains 200 µg IgG₂κ, kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

β-dystroglycan (4F7) is available conjugated to agarose (sc-33702 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-33702 HRP), 200 µg/ml, for WB, IHC/P and ELISA; to either phycoerythrin (sc-33702 PE), fluorescein (sc-33702 FITC), Alexa Fluor® 488 (sc-33702 AF488), Alexa Fluor® 546 (sc-33702 AF546), Alexa Fluor® 594 (sc-33702 AF594) or Alexa Fluor® 647 (sc-33702 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-33702 AF680) or Alexa Fluor® 790 (sc-33702 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

### APPLICATIONS
β-dystroglycan (4F7) 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 immunohistochemistry (including paraffin-embedded sections) (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 β-dystroglycan precursor: 97 kDa.

Molecular Weight of mature β-dystroglycan: 43 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, SK-BR-3 cell lysate: sc-2218 or C6 whole cell lysate: sc-364373.

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

### DATA

#### Western blot
![Western blot analysis of β-dystroglycan expression in C6 (A), L6 (B), SK-BR-3 (C), NIH/3T3 (D) and A-10 (E) whole cell lysates.](image)

#### Immunofluorescence
![Immunofluorescence staining of methanol-fixed L6 cells showing membrane localization (A).](image)

### SELECT PRODUCT CITATIONS

### RESEARCH USE
For research use only, not for use in diagnostic procedures.

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