SANTA CRUZ BIOTECHNOLOGY, INC.

dystrophin (MANDRA1): sc-73592

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Dystrophin-glycoprotein complex (DGC) connects the F-Actin cytoskeleton on the inner surface of muscle fibers to the surrounding extracellular matrix, through the cell membrane interface. A deficiency in this protein contributes to Duchenne (DMD) and Becker (BMD) muscular dystrophies. The human dystrophin gene measures 2.4 megabases, has more than 80 exons, produces a 14 kb mRNA and contains at least 8 independent tissue-specific promoters and 2 poly A sites. The dystrophin mRNA can undergo differential splicing and produce a range of transcripts that encode a large set of proteins. Dystrophin represents approximately 0.002% of total striated muscle protein and localizes to triadic junctions in skeletal muscle, where it is thought to influence calcium ion homeostasis and force transmission.

CHROMOSOMAL LOCATION

Genetic locus: DMD (human) mapping to Xp21.2; Dmd (mouse) mapping to X B.

SOURCE

dystrophin (MANDRA1) is a mouse monoclonal antibody raised against amino acids 3200-3684 of human recombinant dystrophin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

dystrophin (MANDRA1) is available conjugated to agarose (sc-73592 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-73592 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-73592 PE), fluorescein (sc-73592 FITC) or Alexa Fluor® 488 (sc-73592 AF488) or Alexa Fluor® 647 (sc-73592 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

RESEARCH USE

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

APPLICATIONS

dystrophin (MANDRA1) is recommended for detection of an epitope corresponding to amino acids 3558-3684 of dystrophin of mouse, rat, human and fish 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 dystrophin siRNA (h): sc-35240, dystrophin siRNA (m): sc-35241, dystrophin shRNA Plasmid (h): sc-35240-SH, dystrophin shRNA Plasmid (m): sc-35241-SH, dystrophin shRNA (h) Lentiviral Particles: sc-35240-V and dystrophin shRNA (m) Lentiviral Particles: sc-35241-V.

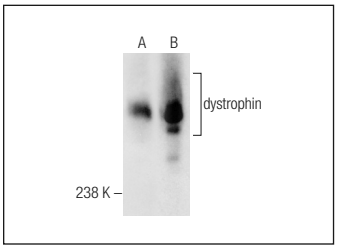
Molecular Weight of dystrophin: 427 kDa.

Positive Controls: human skeletal muscle extract: sc-363776, rat skeletal muscle extract: sc-364810 or L8 cell lysate: sc-3807.

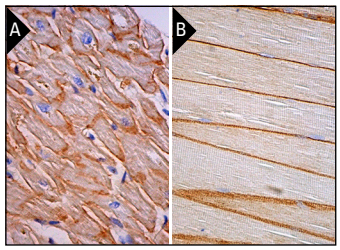
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



dystrophin (MANDRA1): sc-73592. Western blot analysis of dystrophin expression in human skeletal muscle (**A**) and rat skeletal muscle (**B**) tissue extracts.



dystrophin (MANDRA1): sc-73592. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing membrane and cytoplasmic staining of myocytes (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse skeletal muscle tissue showing membrane staining of myocytes (**B**).

SELECT PRODUCT CITATIONS

1. Sim, S.E., et al. 2016. The brain-enriched microRNA miR-9-3p regulates synaptic plasticity and memory. J. Neurosci. 36: 8641-8652.
2. Wattin, M., et al. 2018. Modulation of protein quality control and proteasome to autophagy switch in immortalized myoblasts from duchenne muscular dystrophy patients. Int. J. Mol. Sci. 19: 178.
3. Wang, Y.L., et al. 2021. The kidney-related effects of polystyrene microplastics on human kidney proximal tubular epithelial cells HK-2 and male C57BL/6 mice. Environ. Health Perspect. 129: 57003.
4. Kann, A.P., et al. 2022. An injury-responsive Rac-to-Rho GTPase switch drives activation of muscle stem cells through rapid cytoskeletal remodeling. Cell Stem Cell 29: 933-947.e6.
5. Schubert, M., et al. 2022. Opposite regulation of homer signal at the NMJ postsynaptic micro domain between slow- and fast-twitch muscles in an experimentally induced autoimmune myasthenia gravis (EAMG) mouse model. Int. J. Mol. Sci. 23: 15052.

STORAGE

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