## SANTA CRUZ BIOTECHNOLOGY, INC.

# dystrophin (MANDRA1): sc-73592



### 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  $\mu g$  lgG\_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  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-73592 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-73592 PE), fluorescein (sc-73592 FITC) or Alexa Fluor<sup>®</sup> 488 (sc-73592 AF488) or Alexa Fluor<sup>®</sup> 647 (sc-73592 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM.

#### **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  $\mu$ g per 100-500  $\mu$ g 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.

#### **STORAGE**

Store at 4° C, \*\*D0 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.

#### DATA







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**

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- 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.
- 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.
- 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.
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- Ninfali, C., et al. 2023. The mesodermal and myogenic specification of hESCs depend on ZEB1 and are inhibited by ZEB2. Cell Rep. 42: 113222.
- Xie, Y., et al. 2024. Activity and phosphatidylcholine transfer protein interactions of skeletal muscle thioesterase Them2 enable hepatic steatosis and insulin resistance. J. Biol. Chem. 300: 107855.
- Yang, J., et al. 2024. Dystrophin 71 deficiency causes impaired aquaporin-4 polarization contributing to glymphatic dysfunction and brain edema in cerebral ischemia. Neurobiol. Dis. 199: 106586.

#### PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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