SANTA CRUZ BIOTECHNOLOGY, INC.

dystrophin (H-5): sc-365954

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 (H-5) is a mouse monoclonal antibody raised against amino acids 801-1100 mapping within an internal region of dystrophin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

dystrophin (H-5) is available conjugated to agarose (sc-365954 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365954 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365954 PE), fluorescein (sc-365954 FITC), Alexa Fluor® 488 (sc-365954 AF488), Alexa Fluor® 546 (sc-365954 AF546), Alexa Fluor® 594 (sc-365954 AF594) or Alexa Fluor® 647 (sc-365954 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365954 AF680) or Alexa Fluor® 790 (sc-365954 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

dystrophin (H-5) is recommended for detection of dystrophin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

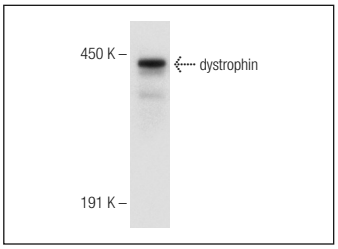
Molecular Weight of dystrophin: 427 kDa.

Positive Controls: L8 cell lysate: sc-3807, rat heart extract: sc-2393 or A-10 cell lysate: sc-3806.

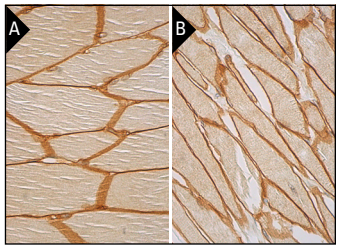
STORAGE

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

DATA



dystrophin (H-5): sc-365954. Western blot analysis of dystrophin expression in rat heart tissue extract.



dystrophin (H-5): sc-365954. Immunoperoxidase staining of formalin fixed, paraffin-embedded rat skeletal muscle (**A**) and human skeletal muscle (**B**) tissue showing membrane and cytoplasmic staining of myocytes.

SELECT PRODUCT CITATIONS

1. Jannas-Vela, S., et al. 2020. Effect of a 12-week endurance training program on force transfer and membrane integrity proteins in lean, obese, and type 2 diabetic subjects. Physiol. Rep. 8: e14429.
2. Hughes, D.C., et al. 2020. Identification and characterization of Fbxl22, a novel skeletal muscle atrophy-promoting E3 ubiquitin ligase. Am. J. Physiol., Cell Physiol. 319: C700-C719.
3. Langer, H.T., et al. 2020. Generation of desminopathy in rats using CRISPR-Cas9. J. Cachexia Sarcopenia Muscle 11: 1364-1376.
4. Langer, H.T., et al. 2021. A mutation in desmin makes skeletal muscle less vulnerable to acute muscle damage after eccentric loading in rats. FASEB J. 35: e21860.
5. Langer, H.T., et al. 2021. Cannabidiol does not impair anabolic signaling following eccentric contractions in rats. Int. J. Sport Nutr. Exerc. Metab. 31: 93-100.
6. Langer, H.T., et al. 2022. Dominant-negative p53-overexpression in skeletal muscle induces cell death and fiber atrophy in rats. Cell Death Dis. 13: 716.

RESEARCH USE

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

PROTOCOLS

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