SANTA CRUZ BIOTECHNOLOGY, INC.

dystrophin (C-20): sc-7461

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 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of dystrophin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7461 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

dystrophin (C-20) is recommended for detection of dystrophin 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

dystrophin (C-20) is also recommended for detection of dystrophin in additional species, including canine, bovine, porcine and avian.

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: A-10 cell lysate: sc-3806, L8 cell lysate: sc-3807 or HeLa whole cell lysate: sc-2200.

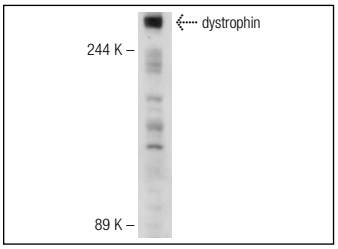
STORAGE

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

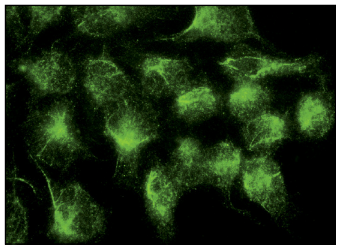
RESEARCH USE

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

DATA



dystrophin (C-20): sc-7461. Western blot analysis of dystrophin expression in HeLa whole cell lysate.



dystrophin (C-20): sc-7461: Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization.

SELECT PRODUCT CITATIONS

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2. Armstrong, D.D., et al. 2005. Wnt/β-catenin signaling activates growth-control genes during overload-induced skeletal muscle hypertrophy. Am. J. Physiol., Cell Physiol. 289: C853-C859.
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4. Xiong, D., et al. 2007. Inducible cardiac-restricted expression of enteroviral protease 2A is sufficient to induce dilated cardiomyopathy. Circulation 115: 94-102.
5. Jeftinija, D.M., et al. 2007. The Ca(V) 1.2 Ca^{2+} channel is expressed in sarcolemma of type I and IIa myofibers of adult skeletal muscle. Muscle Nerve 36: 482-490.
6. Yamaguchi, Y., et al. 2007. β-defensin overexpression induces progressive muscle degeneration in mice. Am. J. Physiol., Cell Physiol. 292: C2141-C2149.
7. Yadava, R.S., et al. 2008. RNA toxicity in myotonic muscular dystrophy induces Nkx-2.5 expression. Nat. Genet. 40: 61-68.
8. van Putten, M., et al. 2012. Comparison of skeletal muscle pathology and motor function of dystrophin and utrophin deficient mouse strains. Neuromuscul. Disord. 22: 406-417.
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