

MyoD (E-1): sc-377186

BACKGROUND

Differentiation of myogenic cells is regulated by multiple positively and negatively acting factors. One well characterized family of helix-loop-helix (HLH) proteins known to play an important role in the regulation of muscle cell development includes MyoD, myogenin, Myf-5 and Myf-6 (also designated MRF-4 or herculin). Of interest, most muscle cells express either MyoD or Myf-5 in the committed state, but when induced to differentiate, all turn on expression of myogenin. MyoD transcription factors form heterodimers with products of a more widely expressed family of bHLH genes, the E family, which consists of at least three distinct genes: E2A, IF2 and HEB. MyoD-E heterodimers bind avidly to consensus (CANNTG) E box target sites that are functionally important elements in the upstream regulatory sequences of many muscle-specific terminal differentiation genes.

CHROMOSOMAL LOCATION

Genetic locus: MyoD1 (mouse) mapping to 7 B4.

SOURCE

MyoD (E-1) is a mouse monoclonal antibody raised against amino acids 1-318 of MyoD of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-377186 X, 200 µg/0.1 ml.

APPLICATIONS

MyoD (E-1) is recommended for detection of MyoD of mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MyoD siRNA (m): sc-35991, MyoD siRNA (r): sc-270217, MyoD shRNA Plasmid (m): sc-35991-SH, MyoD shRNA Plasmid (r): sc-270217-SH, MyoD shRNA (m) Lentiviral Particles: sc-35991-V and MyoD shRNA (r) Lentiviral Particles: sc-270217-V.

MyoD (E-1) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of MyoD: 45 kDa.

Positive Controls: C2C12 whole cell lysate: sc-364188, RAW 264.7 whole cell lysate: sc-2211 or Sol8 nuclear extract: sc-2157.

STORAGE

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

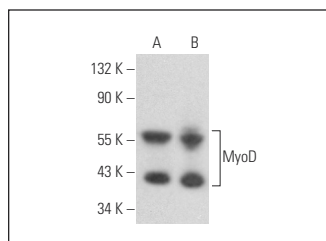
PROTOCOLS

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

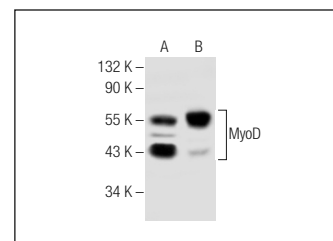
RESEARCH USE

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

DATA



MyoD (E-1): sc-377186. Western blot analysis of MyoD expression in C3H/10T1/2 (A) and RAW 264.7 (B) whole cell lysates.



MyoD (E-1): sc-377186. Western blot analysis of MyoD expression in C2C12 whole cell lysate (A) and Sol8 nuclear extract (B).

SELECT PRODUCT CITATIONS

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- Johnstone, S.A., et al. 2015. Comparison of human olfactory and skeletal MSCs using osteogenic nanotopography to demonstrate bone-specific bioactivity of the surfaces. *Acta Biomater.* 13: 266-276.
- Cho, J.H., et al. 2016. Proteomic assessment of the relevant factors affecting pork meat quality associated with longissimus dorsi muscles in duroc pigs. *Asian-australas. J. Anim. Sci.* 29: 1653-1663.
- Zhu, M., et al. 2017. NDRG4 promotes myogenesis via Akt/CREB activation. *Oncotarget* 8: 101720-101734.
- Giménez, C.S., et al. 2018. Aligned ovine diaphragmatic myoblasts overexpressing human connexin-43 seeded on poly (L-lactic acid) scaffolds for potential use in cardiac regeneration. *Cytotechnology* 70: 651-664.
- Suh, H.R., et al. 2019. Apoptotic changes in a full-lengthened immobilization model of rat soleus muscle. *Muscle Nerve* 59: 263-269.
- Lin, F.H., et al. 2020. Lmod3 promotes myoblast differentiation and proliferation via the Akt and ERK pathways. *Exp. Cell Res.* 396: 112297.
- Lee, M.K., et al. 2021. *Pyropia yezoensis* protein protects against TNF- α -induced myotube atrophy in C2C12 myotubes via the NF κ B signaling pathway. *Mol. Med. Rep.* 24: 486.

CONJUGATES

See **MyoD (G-1): sc-377460** for MyoD antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.