

Product Datasheet

MyoD Antibody (5.8A) - BSA Free NB100-56511

Unit Size: 0.1 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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NB100-56511

MyoD Antibody (5.8A) - BSA Free

Product Information	
Unit Size	0.1 mg
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	5.8A
Preservative	0.02% Sodium Azide
Isotype	IgG1 Kappa
Purity	Protein G purified
Buffer	PBS

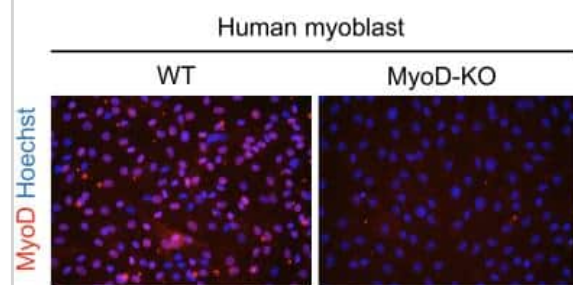
Product Description	
Description	There is considerable literature published using the MyoD, Clone 5.8A antibody. The original development publication of the MyoD antibody, Clone 5.8A showed that the antibody detected MyoD in rhabdomyosarcomas by IHC (frozen) but not in normal adult tissues (Dias, 1992) or normal fetal skeletal muscle. The 5.8A clone also detected MyoD1 in a subset of Wilms' tumors and one ectomesenchyoma, neoplasms known to contain myogenic elements. These results led to the concept in 1992 that the 5.8A clone may be useful for differentiating rhabdomyosarcomas from other soft tissue malignancies. However, as there has been a myriad of publications since Clone 5.8A was first described, users are encourage to consult the scientific literature citing Clone 5.8A to determine the suitability of the antibody for their model system.
Host	Mouse
Gene ID	4654
Gene Symbol	MYOD1
Species	Human, Mouse
Specificity/Sensitivity	In Rh-30, a ~45 kDa band should be observed.
Immunogen	The 5.8A antibody was made against recombinant mouse MyoD protein but it also recognizes human (myf3), rat, and cat homologs. The epitope of this antibody was mapped to a region within aa 180-189 of mouse MyoD (NP_002469).
Notes	There is considerable literature published using the MyoD, Clone 5.8A antibody. The original development publication of the MyoD antibody, Clone 5.8A showed that the antibody detected MyoD in rhabdomyosarcomas by IHC (frozen) but not in normal adult tissues (Dias, 1992) or normal fetal skeletal muscle. The 5.8A clone also detected MyoD1 in a subset of Wilms' tumors and one ectomesenchyoma, neoplasms known to contain myogenic elements. These results led to the concept in 1992 that the 5.8A clone may be useful for differentiating rhabdomyosarcomas from other soft tissue malignancies. However, as there has been a myriad of publications since Clone 5.8A was first described, users are encourage to consult the scientific literature citing Clone 5.8A to determine the suitability of the antibody for their model system.

Product Application Details

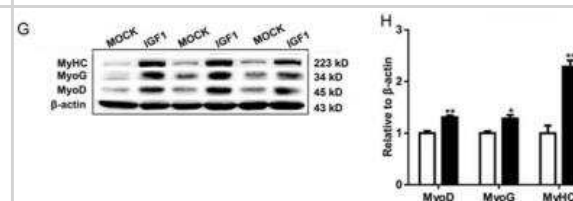
Applications	Western Blot, Immunohistochemistry-Paraffin, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunoprecipitation, Knockdown Validated, Knockout Validated
Recommended Dilutions	Western Blot 1 ug/ml, Flow Cytometry, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence 5 ug/ml, Immunoprecipitation 1 ug/ml, Immunohistochemistry-Paraffin, Immunohistochemistry-Frozen 1:10-1:500, Knockout Validated, Knockdown Validated
Application Notes	There is considerable literature published using the MyoD, Clone 5.8 antibody. The original development publication of the MyoD antibody, Clone 5.8A showed that the antibody detected MyoD in rhabdomyosarcomas by IHC (frozen) but not in normal adult tissues (Dias, 1992) or normal fetal skeletal muscle. The 5.8A clone also detected MyoD1 in a subset of Wilms' tumors and one ectomesenchyoma, neoplasms known to contain myogenic elements. These results led to the concept in 1992 that the 5.8A clone may be useful for differentiating rhabdomyosarcomas from other soft tissue malignancies. However, as there has been a myriad of publications since Clone 5.8A was first described, users are encourage to consult the scientific literature citing Clone 5.8A to determine the suitability of the antibody for their model system. Knockdown and IHC-paraffin validation (PMID: 28775895). Use in FLOW reported in scientific literature (Suparamaniam U A et al). This MyoD antibody is validated for Knockout from a verified customer review.

Images

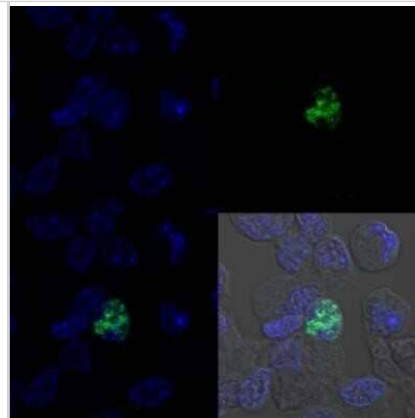
Immunocytochemistry/Immunofluorescence: MyoD Antibody (5.8A) [NB100-56511] - Human myoblasts were stained with MyoD1 antibody, diluted 1:200. ICC/IF image submitted by a verified customer review.



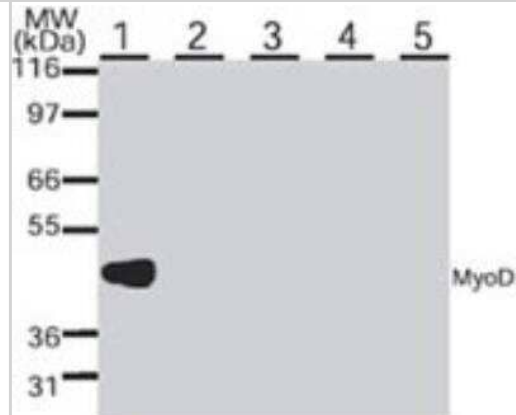
Western Blot: MyoD Antibody (5.8A) [NB100-56511] - Insuline-like growth factor (IGF1) antagonized the effects of miR-106a-5p on myogenic differentiation in C2C12. All data were collected from C2C12 myotubes 5 d post differentiation. Western-blot analysis of myogenic regulatory factors (MyoD, MyoG, MyHC) in cells; (H) The statistical results of Figure 3G. Data were presented as mean +/- SEM. n = 3 per group. * p < 0.05, ** p < 0.01. Image collected and cropped by CiteAb from the following publication (<https://www.mdpi.com/2073-4425/9/7/333/htm>) licensed under a CC-BY license. anti-MyoG (catalog# NB100-56510)



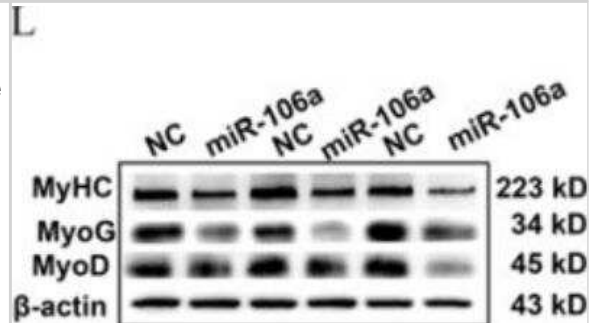
Immunocytochemistry/Immunofluorescence: MyoD Antibody (5.8A) [NB100-56511] - Cell Lines Tested: mouse skeletal muscle-derived primary cell population Test Sample Preparation: mouse skeletal muscle digested by collagenase type 2 System: Super Sensitive High Resolution Confocal Laser Microscope (LSM880 with Airyscan) Excitation Wavelength: 488nm Emission Filter: 562 nm. Image using the DyLight 488 form of this antibody. ICC/IF image submitted by a verified customer review.



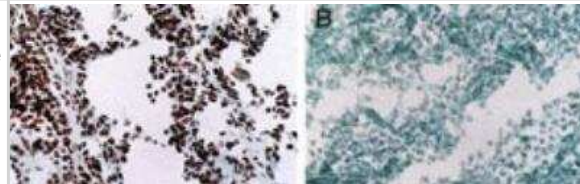
Western Blot: MyoD Antibody (5.8A) [NB100-56511] - Analysis for MyoD expression in various small round cell tumor lines using 1 ug/mL anti-MyoD mAb. The antibody only reacts with a band of approx. 45 kDa in the rhabdomyosarcoma cell line (Rh30, lane 1) but was negative against the primitive neuroectodermal (PFSK-1A, lane 2), lymphoma (EB2, lane 3), neuroblastoma (SK-N-SH, lane 4), and Ewing's sarcoma (SJSA-1, lane 5) cell lines.



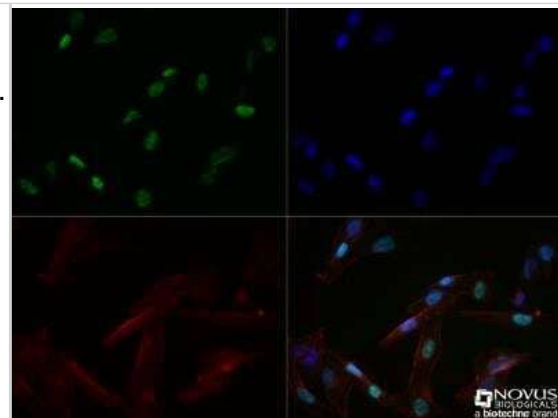
Western Blot: MyoD Antibody (5.8A) [NB100-56511] - MiR-106a-5p inhibited the myogenic differentiation of C2C12 myoblasts. Western blot analyzed for MyoD, MyoG, MyHC proteins 5 d post differentiation. Image collected and cropped by CiteAb from the following publication (<https://www.mdpi.com/2073-4425/9/7/333/htm>) licensed under a CC-BY license. anti-MyoG (catalog# NB100-56510)



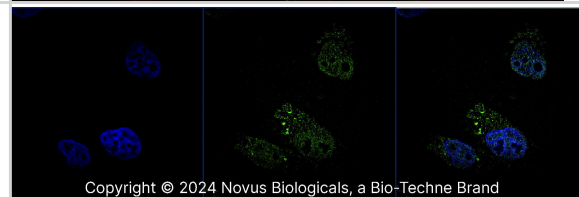
Immunohistochemistry-Frozen: MyoD Antibody (5.8A) [NB100-56511] - Clone 5.8A antibody in human tissues. A. Rhabdomyosaroma (nuclei are stained), B. Lymphoma (staining is absent)



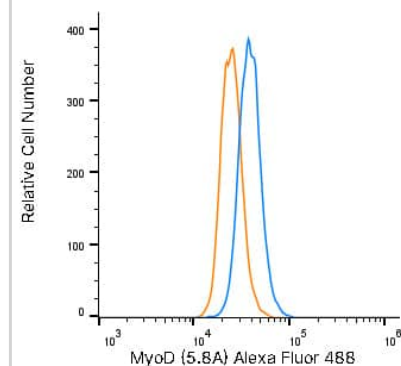
Immunocytochemistry/Immunofluorescence: MyoD Antibody (5.8A) [NB100-56511] - RD cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X TBS + 0.5% Triton X-100. The cells were incubated with anti-MyoD1 (5.8A) NB100-56511 at a 1:200 dilution overnight at 4C and detected with anti-mouse DyLight 488 (Green) at a 1:500 dilution. Actin was counterstained with Phalloidin 568 (Red) at a 1:200 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.



MyoD (5.8A) was detected in immersion fixed SJCRH30 human Rhabdomyosarcoma cell line with Mouse anti-MyoD (5.8A) Protein-G purified Monoclonal Antibody conjugated to Alexa Fluor® 488 (Catalog # NB100-56511AF488) (green) at 10 µg/mL overnight at 4C. Cells were counterstained with DAPI (dark blue). Cells were imaged using a 100X objective and digitally deconvolved.

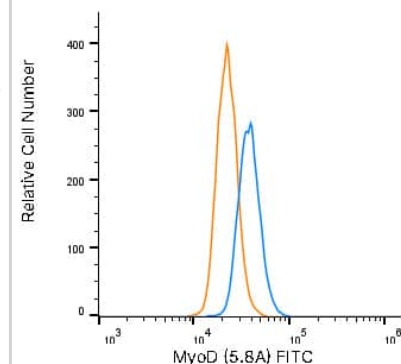


An intracellular stain was performed on SJCRH30 human Rhabdomyosarcoma cell line with Mouse anti- MyoD (5.8A) Protein-G purified Monoclonal Antibody conjugated to Alexa Fluor® 488 (Catalog # NB100-56511AF488, blue histogram) or matched control antibody (orange histogram) at 10 µg/mL for 30 minutes at RT.



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An intracellular stain was performed on SJCRH30 human Rhabdomyosarcoma cell line with Mouse anti- MyoD (5.8A) Protein-G purified Monoclonal Antibody conjugated to FITC (Catalog # NB100-56511F, blue histogram) or matched control antibody (orange histogram) at 5 µg/mL for 30 minutes at RT.



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Publications

Andre AB, Rees KP, O'Connor S et al. Single cell analysis reveals satellite cell heterogeneity for proinflammatory chemokine expression *Frontiers in cell and developmental biology* 2023-03-27 [PMID: 37051469] (Immunoprecipitation, Western Blot, Immunocytochemistry/ Immunofluorescence, Mouse)

Details:

1:500 IHC-P dilution

Jo, SI;Park, YS;Chang, Y;Moon, JH;Lee, S;Lee, H;Kim, M;Kim, DY;Bae, S;Park, SY;Yun, H;You, JE;Im, M;Han, HJ;Kim, SY;Jin, DH; Effects of the purified dry extract of fermented ginseng BST204 on muscle fiber regeneration *Biochemistry and biophysics reports* 2023-09-01 [PMID: 37601455] (Immunoprecipitation, Western Blot, Immunocytochemistry/ Immunofluorescence, Mouse)

L Xu, M Zhang, L Shi, X Yang, L Chen, N Cao, A Lei, Y Cao Neural stemness contributes to cell tumorigenicity *Cell & bioscience*, 2021-01-19;11(1):21. 2021-01-19 [PMID: 33468253] (Immunoprecipitation, Western Blot, Immunocytochemistry/ Immunofluorescence, Mouse)

Charles-Peter Xavier, Raphael H Rastetter, Maria Stumpf, André Rosentreter, Rolf Müller, Jens Reimann, Susanne Cornfine, Stefan Linder, Vanessa van Vliet, Andreas Hofmann, Reginald O Morgan, Maria-Pilar Fernandez, Rolf Schröder, Angelika A Noegel, Christoph S Clemen Structural and functional diversity of novel coronin 1C (CRN2) isoforms in muscle. *Journal of molecular biology* 2009-10-20 [PMID: 19651142]

Zhao T, Zhao R, Yi X et al. METTL3 promotes proliferation and myogenic differentiation through m6A RNA methylation/YTHDF1/2 signaling axis in myoblasts *Life sciences* 2022-03-26 [PMID: 35351467] (WB, Mouse)

Chen L, Zhang M, Fang L Et al. Coordinated regulation of the ribosome and proteasome by PRMT1 in the maintenance of neural stemness in cancer cells and neural stem cells *The Journal of biological chemistry* 2021-10-04 [PMID: 34619150] (ICC/IF, Mouse)

Song R, Zhao S, Xu Y Et al. MRTF-A regulates myoblast commitment to differentiation by targeting PAX7 during muscle regeneration *Journal of cellular and molecular medicine* 2021-08-04 [PMID: 34347392] (ICC/IF, Mouse)

Fang WY, Tseng YT, Lee TY et al. Triptolide prevents lipopolysaccharide-induced skeletal muscle atrophy via inhibiting NF-kappa B/TNF-alpha and regulating protein synthesis/degradation pathway *British journal of pharmacology* 2021-03-31 [PMID: 33788266]

Peng Y, Xu M, Dou M et al. MicroRNA-129-5p Inhibited C2C12 Myogenesis and Repressed Slow Fiber Gene Expression in vitro *American journal of physiology. Cell physiology* 2021-04-07 [PMID: 33826407]

Cai R, Zhang Q, Wang Y et al. Lnc-ORA interacts with microRNA-532-3p and IGF2BP2 to inhibit skeletal muscle myogenesis *The Journal of biological chemistry* 2021-02-03 [PMID: 33548229] (WB, Mouse)

Takashima S, Usui S, Inoue O, et al. Myocyte-specific enhancer factor 2c triggers transdifferentiation of adipose tissue-derived stromal cells into spontaneously beating cardiomyocyte-like cells *Scientific reports* 2021-01-15 [PMID: 33452355] (ICC/IF, FLOW, Mouse)

Hosoyama T, Nishijo K et al. Rb1 gene inactivation expands satellite cell and postnatal myoblast pools. *J Biol Chem* 2011-03-06 [PMID: 21478154] (IF/IHC, Mouse)

More publications at <http://www.novusbio.com/NB100-56511>



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NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-43319-0.5mg	Mouse IgG1 Kappa Isotype Control (P3.6.2.8.1)
NB100-56511G	MyoD Antibody (5.8A) [DyLight 488]

Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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