

Myogenin Monoclonal Antibody (F5D), eBioscience™

Product Details

Size	100 µg
Species Reactivity	Dog, Human, Mouse, Rat
Published Species	Dog, Human, Mouse
Host/Isotype	Mouse / IgG1
Class	Monoclonal
Type	Antibody
Clone	F5D
Conjugate	Unconjugated
Form	Liquid
Concentration	0.5 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	0.09% sodium azide
Storage conditions	4° C
RRID	AB_1907431

Applications	Tested Dilution	Publications
Western Blot (WB)	1-5 µg/mL	2 Publications
Immunohistochemistry (IHC)	-	1 Publication
Immunohistochemistry (Paraffin) (IHC (P))	-	1 Publication
Immunocytochemistry (ICC/IF)	1-5 µg/mL	3 Publications

Product Specific Information

Description: This F5D monoclonal antibody reacts with human, mouse, dog, and rat myogenin, a 34-kDa transcription factor. Expressed in skeletal and heart muscle, myogenin is a member of the MyoD family of basic-helix-loop-helix proteins, which also includes MyoD, Myf5, and MRF4. This transcription factor interacts with other helix-loop-helix proteins, which may or may not be muscle-specific. Myogenin plays a significant role in myogenic differentiation, even directing nonmuscle cells to the myogenic lineage. Transforming growth factor-beta (TGFβ) and bone morphogenetic protein-2 (BMP2) inhibit myogenin transcriptional activity. Predominantly residing within the nucleus, the subcellular localization of myogenin has been shown to be dependent on differentiation status and cell density. For instance, trafficking of myogenin between the nucleus and cytoplasm has been reported during skeletal muscle differentiation to mediate transcription control.

Applications Reported: This F5D antibody has been reported for use in immunoblotting (WB) and immunocytochemistry.

Applications Tested: This F5D antibody has been tested by western blot and immunocytochemistry of the C2C12 cell line. This can be used at less than or equal to 1-5 µg/mL for both applications. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Purity: Greater than 90%, as determined by SDS-PAGE.

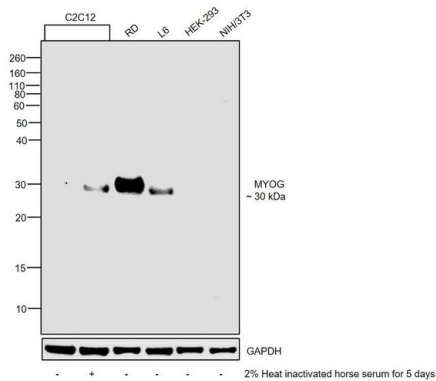
Aggregation: Less than 10%, as determined by HPLC.

Filtration: 0.2 µm post-manufacturing filtered.

Product Images For Myogenin Monoclonal Antibody (F5D), eBioscience™

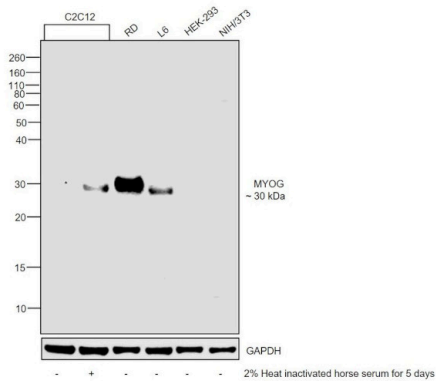
Myogenin Antibody (14-5643-82) in WB

Western blot was performed using Anti-Myogenin Monoclonal Antibody (F5D), eBioscience™ (Product # 14-5643-82) and a 30 kDa band corresponding to MYOG was observed across cell lines except HEK-293 and NIH/3T3 which are reported to be negative and also increased upon 2% heat inactivated horse serum treatment. Modified whole cell extracts (1% SDS) (30 µg lysate) of C2C12 (Lane 1), C2C12 treated with 2% heat inactivated horse serum for 5days (Lane 2), RD (Lane 3), L6 (Lane 4), HEK-293 (Lane 5) and NIH/3T3 (Lane 6) were electrophoresed using Novex® NuPAGE® 12 % Bis-Tris gel (Product # NP0342BOX). Resolved proteins were then transferred onto a nitrocellulose membrane (Product # IB23001) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (2.5 ug/ml) and detected by chemiluminescence with Goat anti-Mouse IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A28177, 1:4000 dilution) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using SuperSignal™ West Dura Extended Duration Substrate (Product # 34076).



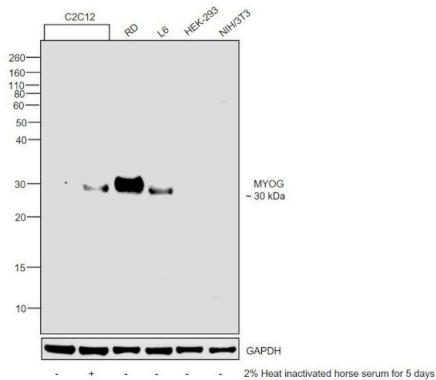
Myogenin Antibody (14-5643-82)

Antibody specificity was demonstrated by detection of differential basal expression of the target across cell lines tested owing to their inherent genetic constitution. Relative expression of MYOG was observed in RD and L6 in comparison to HEK-293 and NIH/3T3 using Anti-Myogenin Monoclonal Antibody (F5D), eBioscience™ (Product # 14-5643-80) in Western Blot. {RE}



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7 References

Western Blot (2)

Group I Paks support muscle regeneration and counteract cancer-associated muscle atrophy.

"14-5643 was used in Immunocytochemistry-immunofluorescence to evaluate the role of group I protein-activated kinases during cancer-related atrophy and muscle regeneration."

Authors: Cerquone Perpetuini A,Re Cecconi AD,Chiappa M,Martinelli GB,Fuoco C,Desiderio G,Castagnoli L,Gargioli C, Piccirillo R,Cesareni G

Year
2018

Species
Mouse

Dilution
1:250

PloS one

Regulation of myoblast differentiation by metabolic perturbations induced by metformin.

"Published figure using Myogenin monoclonal antibody (Product # 14-5643-82) in Western Blot"

Authors: Pavlidou T,Rosina M,Fuoco C,Gerini G,Gargioli C,Castagnoli L,Cesareni G

Year
2017

Species
Mouse

Dilution
1:500

Immunohistochemistry (1)

Neuropathology : official journal of the Japanese Society of Neuropathology

Extra-axial sacral soft tissue giant cell ependymoma affecting a child: Case report and review of the literature.

"14-5643-82 was used in Immunohistochemistry to provide a case report for extra-axial soft tissue sacral GCE reported in a child."

Authors: Planas S,Cruz O,Bejarano M,Albert A,Rovira C,Bombi JA

Year
2021

Species
Human

Dilution
1:100

Immunohistochemistry (Paraffin) (1)

Veterinary pathology

Evaluation of Myogenin and MyoD1 as Immunohistochemical Markers of Canine Rhabdomyosarcoma.

"14-5643-82 was used in Immunohistochemistry to demonstrate that MyoD1 and myogenin should be included with desmin as part of a diagnostic IHC panel for canine RMS."

Authors: Tuohy JL,Byer BJ,Royer S,Keller C,Nagai-Singer MA,Regan DP,Seguin B

Year
2021

Species
Dog

Dilution
1:800

More applications with references on thermofisher.com

ICC/IF (3)

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