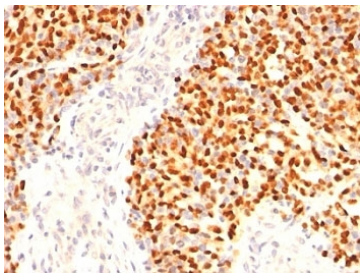
Myogenin Antibody F5D / MYOG Monoclonal Antibody [clone F5D] (V3153)

Catalog No.	Formulation	Size
V3153-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3153-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3153SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3153IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Citations (21)

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	F5D
Purity	Protein G affinity chromatography
UniProt	P15173
Gene ID	4656
Localization	Nuclear
Applications	ELISA (order BSA/sodium Azide-free Format For Coating) : Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This Myogenin Antibody F5D / MYOG Monoclonal Antibody is available for research use only.



Myogenin Antibody by IHC in human rhabdomyosarcoma. Immunohistochemistry of formalin-fixed, paraffin-embedded human rhabdomyosarcoma tissue using Myogenin Antibody clone F5D demonstrates strong brown nuclear staining in numerous tumor cells. The staining is predominantly nuclear, consistent with the localization of myogenin as a transcription factor involved in skeletal muscle differentiation. A population of tumor cells exhibits intense immunoreactivity, while other regions show comparatively weaker staining or an absence of staining. The surrounding pale stromal areas provide contrast to the positively stained tumor nuclei. This MYOG Monoclonal Antibody highlights myogenin expression in rhabdomyosarcoma, a malignancy characterized by skeletal muscle differentiation.

Description

Myogenin Antibody F5D / MYOG Monoclonal Antibody recognizes myogenin, a muscle-specific transcription factor encoded by the MYOG gene. Myogenin belongs to the myogenic regulatory factor (MRF) family of basic helix-loop-helix (bHLH) transcription factors, which also includes MYOD1, MYF5 and MYF6. These proteins coordinate skeletal muscle development by regulating the expression of genes required for myoblast differentiation and muscle fiber formation. Myogenin is particularly important during the transition from proliferating myoblasts to differentiated muscle cells.

During myogenesis, myogenin expression increases as muscle precursor cells exit the cell cycle and begin terminal differentiation. The protein forms heterodimers with E-proteins and binds E-box DNA sequences within regulatory regions of muscle-specific genes. This promotes transcriptional programs involved in myofibril assembly, muscle contraction and the formation of functional skeletal muscle fibers. Myogenin activity is influenced by upstream myogenic regulators, chromatin remodeling complexes and signaling pathways that coordinate muscle growth and differentiation.

Unlike MYOD1 and MYF5, which are strongly associated with myogenic lineage determination, myogenin has a particularly important role in terminal muscle differentiation. Genetic studies have demonstrated that myogenin is essential for normal skeletal muscle formation during embryonic development. Its expression is also involved in muscle regeneration, where satellite cell-derived myoblasts activate differentiation programs following tissue injury. Altered MYOG regulation has been investigated in muscle degeneration, impaired regeneration and disorders affecting skeletal muscle development.

Myogenin is also an established nuclear marker of skeletal muscle differentiation in tumor pathology. Its expression is frequently associated with rhabdomyosarcoma, a malignancy exhibiting skeletal muscle differentiation. Nuclear myogenin expression can provide information about the myogenic characteristics of tumor cells, although staining patterns and expression levels vary among tumor subtypes. Clone F5D is a well-established mouse monoclonal antibody recognizing an epitope associated with amino acids 138-158 of myogenin. NSJ Bioreagents offers this MYOG Monoclonal Antibody for investigating myogenic differentiation and the biological regulation of skeletal muscle development. A Myogenin Antibody can help characterize MYOG expression and its relationship to muscle differentiation and tumor biology.

Explore our Cancer Antibodies for investigating tumor differentiation, transcriptional regulation, and molecular markers associated with skeletal muscle malignancies.

Application Notes

The optimal dilution of the Myogenin Antibody F5D / MYOG Monoclonal Antibody for each application should be determined by the researcher.

1. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 minutes.
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Amino acids 138-158 from the rat protein were used as the immunogen for this Myogenin Antibody F5D.

Storage

Store the Myogenin Antibody F5D at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

MYOG antibody, Myogenic factor 4 antibody, Myf-4 antibody, Myogenic differentiation factor antibody, Myogenin F5D antibody

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