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MYOG Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP14940c

Specification

MYOG Antibody (Center) Blocking Peptide - Product Information

Primary Accession P15173

MYOG Antibody (Center) Blocking Peptide - Additional Information

Gene ID 4656

Other Names
Myogenin, Class C basic helix-loop-helix protein 3, bHLHc3, Myogenic factor 4, Myf-4, MYOG, BHLHC3, MYF4

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

MYOG Antibody (Center) Blocking Peptide - Protein Information

Name MYOG

Synonyms BHLHC3, MYF4

Function
Acts as a transcriptional activator that promotes transcription of muscle-specific target genes and plays a role in muscle differentiation, cell cycle exit and muscle atrophy. Essential for the development of functional embryonic skeletal fiber muscle differentiation. However is dispensable for postnatal skeletal muscle growth; phosphorylation by CAMK2G inhibits its transcriptional activity in respons to muscle activity. Required for the recruitment of the FACT complex to muscle-specific promoter regions, thus promoting gene expression initiation. During terminal myoblast differentiation, plays a role as a strong activator of transcription at loci with an open chromatin structure previously initiated by MYOD1. Together with MYF5 and MYOD1, co-occupies muscle-specific gene promoter core regions during myogenesis. Cooperates also with myocyte-specific enhancer factor MEF2D and BRG1-dependent recruitment of SWI/SNF chromatin-remodeling enzymes to alter chromatin structure at myogenic late gene promoters. Facilitates cell cycle exit during terminal muscle differentiation through the up-regulation of miR-20a expression, which in turn represses genes involved in cell cycle progression. Binds to the E-box containing (E1) promoter region of the miR-20a gene. Plays also a role in preventing reversal of muscle cell differentiation. Contributes to the atrophy-related gene expression in adult denervated muscles.

Induces fibroblasts to differentiate into myoblasts (By similarity).

Cellular Location
Nucleus. Note=Recruited to late myogenic gene promoter regulatory sequences with SMARCA4/BRG1/BAF190A and SWI/SNF chromatin-remodeling enzymes to promote chromatin-remodeling and transcription initiation in developing embryos.

MYOG Antibody (Center) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

MYOG Antibody (Center) Blocking Peptide - Images

MYOG Antibody (Center) Blocking Peptide - Background

Myogenin is a muscle-specific transcription factor thatcan induce myogenesis in a variety of cell types in tissue culture.It is a member of a large family of proteins related by sequencehomology, the helix-loop-helix (HLH) proteins. It is essential forthe development of functional skeletal muscle. [provided byRefSeq].

MYOG Antibody (Center) Blocking Peptide - References

Gao, X., et al. J. Cell. Biochem. 110(1):162-170(2010)Yerges, L.M., et al. J. Bone Miner. Res. 24(12):2039-2049(2009)Ramamoorthy, S., et al. Am. J. Physiol. Endocrinol. Metab. 297 (2), E392-E401 (2009) :Nanni, P., et al. Mol. Cancer Ther. 8(4):754-761(2009)Gong, C., et al. Genes Dev. 23(1):54-66(2009)