

#### **MBNL1** Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP20042b

## **Specification**

# MBNL1 Antibody (C-term) - Product Information

WB,E Application **Primary Accession 09NR56** Other Accession NP 066368.2 Reactivity Human Host **Rabbit** Clonality **Polyclonal** Isotype Rabbit IgG Calculated MW 41817 Antigen Region 255-284

## MBNL1 Antibody (C-term) - Additional Information

#### **Gene ID 4154**

#### **Other Names**

Muscleblind-like protein 1, Triplet-expansion RNA-binding protein, MBNL1, EXP, KIAA0428, MBNL

#### Target/Specificity

This MBNL1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 255-284 amino acids from the C-terminal region of human MBNL1.

#### **Dilution**

WB~~1:1000

E~~Use at an assay dependent concentration.

#### **Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

#### Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

## **Precautions**

MBNL1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## MBNL1 Antibody (C-term) - Protein Information

#### Name MBNL1

Synonyms EXP, KIAA0428, MBNL



**Function** Mediates pre-mRNA alternative splicing regulation. Acts either as activator or repressor of splicing on specific pre-mRNA targets. Inhibits cardiac troponin-T (TNNT2) pre-mRNA exon inclusion but induces insulin receptor (IR) pre-mRNA exon inclusion in muscle. Antagonizes the alternative splicing activity pattern of CELF proteins. Regulates the TNNT2 exon 5 skipping through competition with U2AF2. Inhibits the formation of the spliceosome A complex on intron 4 of TNNT2 pre-mRNA. Binds to the stem-loop structure within the polypyrimidine tract of TNNT2 intron 4 during spliceosome assembly. Binds to the 5'-YGCU(U/G)Y-3'consensus sequence. Binds to the IR RNA. Binds to expanded CUG repeat RNA, which folds into a hairpin structure containing GC base pairs and bulged, unpaired U residues. Together with RNA binding proteins RBPMS and RBFOX2, activates vascular smooth muscle cells alternative splicing events (PubMed:37548402). Regulates NCOR2 alternative splicing (By similarity).

#### **Cellular Location**

Nucleus. Cytoplasm. Cytoplasmic granule. Note=Localized with DDX1, TIAL1 and YBX1 in stress granules upon stress (PubMed:18335541). Localized in the cytoplasm of multinucleated myotubes (PubMed:18335541). Colocalizes with nuclear foci of retained expanded-repeat transcripts in myotubes from patients affected by myotonic dystrophy (PubMed:10970838, PubMed:11590133, PubMed:11929853)

#### **Tissue Location**

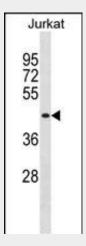
Highly expressed in cardiac, skeletal muscle and during myoblast differentiation. Weakly expressed in other tissues (at protein level). Expressed in heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas.

## MBNL1 Antibody (C-term) - Protocols

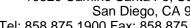
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## MBNL1 Antibody (C-term) - Images



MBNL1 Antibody (C-term) (Cat. #AP20042b) western blot analysis in Jurkat cell line lysates





(35ug/lane). This demonstrates the MBNL1 antibody detected the MBNL1 protein (arrow).

# MBNL1 Antibody (C-term) - Background

Mediates pre-mRNA alternative splicing regulation. Acts either as activator or repressor of splicing on specific pre-mRNA targets. Inhibits cardiac troponin-T (TNNT2) pre-mRNA exon inclusion but induces insulin receptor (IR) pre-mRNA exon inclusion in muscle. Antagonizes the alternative splicing activity pattern of CELF proteins. Regulates the TNNT2 exon 5 skipping through competition with U2AF2. Inhibits the formation of the spliceosome A complex on intron 4 of TNNT2 pre-mRNA. Binds to the stem-loop structure within the polypyrimidine tract of TNNT2 intron 4 during spliceosome assembly. Binds to the 5'-YGCU(U/G)Y-3'consensus sequence. Binds to the IR RNA. Binds to expanded CUG repeat RNA, which folds into a hairpin structure containing GC base pairs and bulged, unpaired U residues.

## MBNL1 Antibody (C-term) - References

Sen, S., et al. J. Biol. Chem. 285(33):25426-25437(2010) Arambula, J.F., et al. Proc. Natl. Acad. Sci. U.S.A. 106(38):16068-16073(2009) Cardani, R., et al. Neuromuscul. Disord. 19(5):335-343(2009) Holt, I., et al. Am. J. Pathol. 174(1):216-227(2009) Teplova, M., et al. Nat. Struct. Mol. Biol. 15(12):1343-1351(2008)