

MBNL2 (Z-24): sc-133774

BACKGROUND

Pre-mRNA splicing is a critical step in the post-transcriptional regulation of gene expression. Several protein complexes are involved in proper mRNA splicing and transport. The muscleblind proteins, MBNL1, MBNL2 and MBNL3, promote inclusion or exclusion of specific exons on different pre-mRNAs by antagonizing the activity of CUG-BP and ETR-3-like factors bound to distinct intronic sites. MBNL1 and MBNL2, associate with expanded CUG repeats *in vitro* and localize to the nuclear foci in both DM1 and DM2 (myotonic dystrophy types 1 and 2), suggesting that the nuclear accumulation of mutant RNA is pathogenic in DM1, therefore implicating muscleblind proteins MBNL1 and MBNL2 in the pathogenesis of both disorders. MBNL2, a 367 amino acid protein, participates in recruitment of Intergrin $\alpha 3$ to focal adhesions in a RNA-dependent protein localization mechanism.

REFERENCES

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2. Miller, J.W., et al. 2000. Recruitment of human muscleblind proteins to (CUG)(n) expansions associated with myotonic dystrophy. EMBO J. 19: 4439-4448.
3. Mankodi, A., et al. 2001. Muscleblind localizes to nuclear foci of aberrant RNA in myotonic dystrophy types 1 and 2. Hum. Mol. Genet. 10: 2165-2170.
4. Fardaei, M., et al. 2002. Three proteins, MBNL, MBLL and MBXL, co-localize *in vivo* with nuclear foci of expanded-repeat transcripts in DM1 and DM2 cells. Hum. Mol. Genet. 11: 805-814.
5. Ho, T.H., Savkur, R.S., Poulos, M.G., Mancini, M.A., Swanson, M.S. and Cooper, T.A. 2005. Co-localization of muscleblind with RNA foci is separable from mis-regulation of alternative splicing in myotonic dystrophy. J. Cell Sci. 118: 2923-2933.
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CHROMOSOMAL LOCATION

Genetic locus: MBNL2 (human) mapping to 13q32.1; Mbnl2 (mouse) mapping to 14 E4.

SOURCE

MBNL2 (Z-24) is an affinity purified rabbit polyclonal antibody raised against synthetic MBNL2 peptide of human origin.

PRODUCT

Each vial contains 50 μ g IgG in 500 μ l PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

MBNL2 (Z-24) is recommended for detection of MBNL2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MBNL2 siRNA (h): sc-60990, MBNL2 siRNA (m): sc-60991, MBNL2 shRNA Plasmid (h): sc-60990-SH, MBNL2 shRNA Plasmid (m): sc-60991-SH, MBNL2 shRNA (h) Lentiviral Particles: sc-60990-V and MBNL2 shRNA (m) Lentiviral Particles: sc-60991-V.

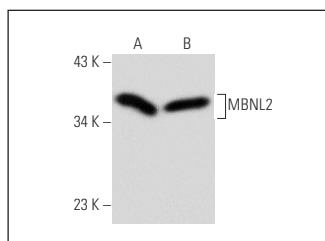
Molecular Weight of MBNL2: 41 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410 or Caki-1 cell lysate: sc-2224.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



MBNL2 (Z-24): sc-133774. Western blot analysis of MBNL2 expression in SK-N-SH (A) and Caki-1 (B) whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **MBNL2 (3B4): sc-136167** or **MBNL2 (D-1): sc-365104**, our highly recommended monoclonal alternatives to MBNL2 (Z-24). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **MBNL2 (3B4): sc-136167**.