Myotonic dystrophy (DM) is an autosomal dominant neuromuscular disease that is associated with a (CTG)n repeat expansion in the 3'-untranslated region of the myotonin protein kinase gene (DMPK). CUG-BP1 and CUG-BP2 are proteins that bind specifically to (CUG)8 oligonucleotides in vitro. While CUG-BP1 has the major binding activity in normal cells, nuclear CUG-BP2 binding activity increases in DM cells. Both CUG-BP1 and CUG-BP2 are isoforms of a novel heterogeneous nuclear ribonucleoprotein (hnRNP), hNab50. CUG-BP1, an RNA CUG triplet repeat binding protein, regulates splicing and translation of various RNAs. Expansion of RNA CUG repeats in the DMPK in DM is associated with alterations in binding activity of CUG-BP1 as well as alterations in the translation of the C/EBPβ transcription factor. CUG-BP1 is an important regulator of initiation from different AUG codons of C/EBPβ mRNA. In normal cells, CUG-BP1 up-regulates the p21 protein during differentiation by inducing the translation of p21 via binding to a GC-rich sequence located within the 5' region of p21 mRNA. In DM cells, failure to accumulate CUG-BP1 leads to a reduction of p21 and alterations in other proteins responsible for cell cycle withdrawal.

CUG-BP1 (3B1) is recommended for detection of CUG-BP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

CUG-BP1 (3B1) is also recommended for detection of CUG-BP1 in additional species, including bovine and porcine.

Suitable for use as control antibody for CUG-BP1 siRNA (h): sc-38251, CUG-BP1 siRNA (m): sc-38252, CUG-BP1 shRNA Plasmid (h): sc-38251-SH, CUG-BP1 shRNA Plasmid (m): sc-38252-SH, CUG-BP1 shRNA (h) Lentiviral Particles: sc-38251-V and CUG-BP1 shRNA (m) Lentiviral Particles: sc-38252-V.

Molecular Weight of CUG-BP1: 56 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

CUG-BP1 (3B1) Alexa Fluor® 647: sc-20003 AF647.


Genetic locus: CELF1 (human) mapping to 11p11.2; Celf1 (mouse) mapping to 2 E1.

CUG-BP1 (3B1) is a mouse monoclonal antibody raised against full length CUG-BP1 fusion protein of human origin.

CUG-BP1 (3B1) is available conjugated to agarose (sc-20003 AC), 500 µg/1 ml of PBS with <0.05% sodium azide and 0.1% gelatin.

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CUG-BP1 (3B1) is also recommended for detection of CUG-BP1 in addition to human and mouse CUG-BP1 in rodents, species, including bovine and porcine.

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