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Product Specification Sheet

Anti-rat CUG-BP1

Cat. # CUGBP11-M Mouse monoclonal anti-rat CUGBP1, IgG # 1 **SIZE**: 100 ug

RNA editing is an important mechanism for regulating genetic plasticity through the generation of alternative protein products from a single structural gene. Substitutional RNA editing employs a variety of genetic mechanisms, the biochemical basis of which has been elucidated following the development of *in vitro* assays that recapitulate important elements of this process. There are two types of substitutional RNA exist in mammals, namely A-to-I and C-to-U RNA editing. The best-characterized example of C-to-U RNA editing involves the nuclear transcript encoding intestinal apolipoprotein B (apo B)). Apo B RNA editing changes a CAA to a UAA stop codon, generating a truncated protein, apoB48. The functional complex includes a minimal core composed of apobec-1 and ACF, that function as an adaptor protein by binding both the deaminase and the RNA substrate. The RNA binding proteins also include CUGBP2 which along with Apobec-1 binds to the consensus binding sequence UUUN (A/U) U, present in c-myc, VEGF and Cyclooxygenase-2 (COX2).

Myotonic dystrophy (DM), a disease associated with an unstable trinucleotide CTG repeat located in the myotonin protein kinase gene (DMPK), whereby expanded CTG (CUG) repeats result in gain of function of specific RNA-binding proteins that could regulate RNA processing in multiple tissues. A novel RNA-binding protein, **CUGBP1**, which specifically binds to CUG repeat sequences. CUGBP has been suggested as a candidate for an RNA-binding protein that regulates a number of RNAs by binding to CUG repeats in regulatory regions of different mRNAs. (CUGBP) exhibited no binding to an RNA oligonucleotide of triplet repeats of the same length but having a different sequence, CGG. The CUG-binding protein was localized to the cytoplasm, whereas double-stranded DNA binding proteins were localized to the nuclear extract.

Rat CUG-BP1 (513 aa, mouse/human 486 aa, chromosome 11p11) also known as CUG-BP1, RNA-binding protein BRUNOL-2, Deadenylation factor CUG-BP, 50 kDa Nuclear polyadenylated RNA-binding protein, EDEN-BP, is expressed in most tissues. SUBCELLULAR LOCATION: Nucleus and cytoplasm Note=RNA-binding activity is detected in both nuclear and cytoplasmic compartments

Source of Antigen and Antibodies

Antigen	Rat purified CUG-BP1 protein (gene accession # Q4QQT3 (487 aa; refs 1)
Epitope Location	unknown
Ab Host/type	Mouse, mono (IgG1) Purified IgG1 (**cat # CUGBP11-M**)
2-ab	**Goat Anti-mouse IgG-HRP conjugate** Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100 ug/100ul solution 50 ug/50 ul lyophilized powder

Buffer: PBS pH 7.4 + 0.05% azide

Reconstitute powder in the original vol. of water

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting (1:1K-5K using ECL technique).

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested.

Specificity & Cross-reactivity

The CUGBP11-M reacts with rat, mouse, and human CUGBP1. Antibody cross-reactivity in various other species has not been studied.

General References: Timchecnko et al (1996) Nucl Acid Res. 24, 4407-4414; Good PJ et al (2000) JBC 275, 28583; Strasuberg R et al (2002) PNAS 99, 16899; Timchenko NA et al (1999) Nucl Acid Res. 27, 4517;

*This product is for In vitro research use only.

Related material available from ADI

Antibodies for CUGBP2, Apobec-1, ACF, VEGF, COX1, COX2, COX3 etc..

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