

Product Specification Sheet

Anti-bovine RNPs protein and controls

Cat. # RNP11-S	Rabbit Anti-bovine RNP antiserum	Size: 100 ul
Cat. # RNP11-C	Recombinant bovine RNP protein control for WB	Size: 100 ul

nRNP Complex antigen is a non-histone nuclear protein composed of several polypeptides of differing molecular weights. It has been shown that RNP and Sm are distinct antigenic sites on the same nuclear molecular matrix consisting of RNA and eight polypeptides, including 70 kD, A(33 kD), C(22 kD) and the Sm peptides B (26 kD), B'(27 kD), D(13 kD), E/F (11 kD doublet), and G (9 kD).

Autoantibodies against the nRNP antigen precipitate the U1a and U1b small nuclear RNAs. The nRNP antigen is involved in normal post transcriptional, premessenger RNA processing to excise introns. It has been demonstrated that the nRNP antigen is both RNase and tryptic digestion sensitive. Autoantibodies to the nRNP antigen, in high titers, have been strongly associated with patients who have Mixed Connective Tissue Disease (MCTD). Other studies have shown that antibodies against the 70 kD polypeptide are found more frequently in sera of MCTD than in anti-nRNP positive SLE patients. It has been suggested that patients showing anti-nRNP antibodies tend to have some of the clinical features of MCTD, regardless of their overall disease diagnosis. Anti-nRNP antibodies only bind the U1 RNP while the anti-Sm binds with the U1 RNP, U2RNP, U4/6RNP, AND U5RNP. Anti-RNP antibodies are often accompanied by anti-Sm antibodies. Double immunodiffusion, passive hemagglutination, Western and ELISA methods are used for detecting anti-nRNP.

Source of Antigen and Antibodies

Antigen	Rabbit/calf thymus purified RNP proteins
Ab Host/type	Rabbit, polyclonal antiserum (cat # bovine RNP11-S)
2-ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Cat # RNP11-C

Purified Bovine/rabbit RNPs for Western blot +ve control (Cat # RNP11-C) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of RNP11-C for good visibility with rabbit antibody Cat # RNP11-S. RNPs is a mixture of several proteins and associated RNAs (including 70 kD, A(33 kD), C(22 kD) and the Sm peptides B (26 kD), B'(27 kD), D(13 kD), E/F (11 kD doublet), and G (9 kD). Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to

loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **#RNP11-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

Form & Storage of Antibodies/Peptide Control

Unpurified antiserum

solution lyophilized powder contains 0.05% azide
Reconstitute powder in 100 ul PBS

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 (1:500-1:5K using ECL technique).

ELISA: Control antigen can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested. We recommend the use of 1;200-:1k diluted antiserum.

Specificity & Cross-reactivity

Anti-RNP antibody reacts with RNPs autoantigens. Antibody cross-reactivity in various species has not been studied. Purified bovine RNPs (#RNP11-C) is available as a control for Western.

General References: Yasuma M, The J of Rheumatology 1990, pg 469-475; Lerner MR, PNAS 76, 1979, 5495-5499; Yang VW, PNAS 78, 1981, 1371-1375; Schrier WH, Cell Biology Intl. Reports 6, 1982, 925-932; Takeda Y Clin. Immunol. Immunopathol. 50, 1989, 212-230; ;

*This product is for In vitro research use only.

Related material available from ADI

SS-A and SS-B, Scl70, recombinant proteins and antibodies
Anti-RNP antibodies and proteins
Mouse anti-RNP ELISA kits

RNP11-S-C 80404A