**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 small nuclear ribonucleoprotein particles (snRNPs) interact with the SRm160/300 splicing coactivator complex to form a large RNA spliceosome. 2,2,7-trimethylguanosine is a nucleoside at the 5' terminal cap site of the snRNA (small ribonucleoprotein RNA) component of U1, U2, U4/U6 and U5 nuclear snRNPs. U-type snRNPs mediate intron splicing of precursor mRNA. Antibodies recognizing the 5' terminal cap motif can inhibit mRNA splicing. Anti-trimethylguanosine (TMG) monoclonal, K121, can immunoprecipitate all major nuclear snRNPs.

**REFERENCES**


**SOURCE**

2,2,7-trimethylguanosine (K121) is a mouse monoclonal antibody raised against trimethylguanosine-keyhole limpet hemocyanin conjugates.

**PRODUCT**

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

2,2,7-trimethylguanosine (K121) is available conjugated to agarose (sc-32724 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-32724 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-32724 PE), fluorescein (sc-32724 FITC), Alexa Fluor® 488 (sc-32724 AF488) or Alexa Fluor® 647 (sc-32724 AF647), 200 µg/ml, for IF, IHC(P) and FCM.

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**APPLICATIONS**

2,2,7-trimethylguanosine (K121) is recommended for detection of 5' terminal 2,2,7-trimethylguanosine of all major snRNAs of mouse, rat and human origin by 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).

Molecular Weight of 2,2,7-trimethylguanosine: 70 kDa.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:

1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
2) Immunofluorescence: use m-IgGκ FITC: sc-516140 or m-IgGκ PE: sc-359850.

**DATA**

2,2,7-trimethylguanosine (K121): sc-32724. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human uterine cervix tissue showing nuclear staining of squamous epithelial cells (B).

**SELECT PRODUCT CITATIONS**


**STORAGE**

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

**RESEARCH USE**

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