2,2,7-trimethylguanosine (K121): sc-32724

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 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 IgG, 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 AG), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-32724 AF488), Alexa Fluor® 488 (sc-32724 AF488), Alexa Fluor® 546 (sc-32724 AF546), Alexa Fluor® 594 (sc-32724 AF594) or Alexa Fluor® 647 (sc-32724 AF647), 200 µg/ml, for WB, IHC and ELISA, to either phycoerythrin (sc-32724 PE), fluorescein (sc-32724 FITC), Alexa Fluor® 488 (sc-32724 AF488), Alexa Fluor® 546 (sc-32724 AF546), Alexa Fluor® 594 (sc-32724 AF594) or Alexa Fluor® 647 (sc-32724 AF647), 200 µg/ml, for WB (RGB), IF, IHC and FCM; and to either Alexa Fluor® 680 (sc-32724 AF680) or Alexa Fluor® 790 (sc-32724 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

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).

RECOMMENDED SUPPORT REAGENTS

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

DATA

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.