

U1 snRNP 70 (C-18): sc-9571

BACKGROUND

U1 small nuclear ribonucleoprotein (U1 snRNP 70 or U1 70) is a component of the RNA spliceosome, a complex of proteins that are required for the precise excision of introns from pre-messenger RNA (pre-mRNA). U1 snRNP 70 specifically associates with the single stranded loop of hairpin 1 on U1 snRNA (small nuclear RNA). Like other snRNPs, U1 snRNP 70 contains a single RNA binding domain of 80-90 amino acids that is located within the central portion of the protein, and is both necessary and sufficient for the specific U1 snRNA binding *in vitro*. This interaction, which occurs independently of ATP, is essential for the commitment to the pre-mRNA splicing pathway, as it facilitates the association of other proteins with the spliceosome. U1 snRNP 70 is diffusely localized in the cytoplasm at the onset of mitosis and as mitosis progresses through telophase, U1 snRNP 70 accumulates in the daughter nuclei.

CHROMOSOMAL LOCATION

Genetic locus: SNRNP70 (human) mapping to 19q13.33; Snrnp70 (mouse) mapping to 7 B4.

SOURCE

U1 snRNP 70 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of U1 snRNP 70 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9571 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

U1 snRNP 70 (C-18) is recommended for detection of U1 snRNP 70 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

U1 snRNP 70 (C-18) is also recommended for detection of U1 snRNP 70 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for U1 snRNP 70 siRNA (h): sc-36768, U1 snRNP 70 siRNA (m): sc-36769, U1 snRNP 70 shRNA Plasmid (h): sc-36768-SH, U1 snRNP 70 shRNA Plasmid (m): sc-36769-SH, U1 snRNP 70 shRNA (h) Lentiviral Particles: sc-36768-V and U1 snRNP 70 shRNA (m) Lentiviral Particles: sc-36769-V.

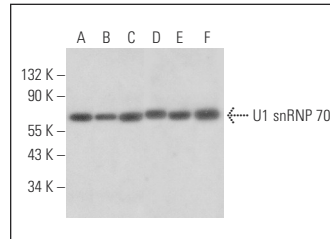
Molecular Weight of U1 snRNP 70: 70 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or HEK293 whole cell lysate: sc-45136.

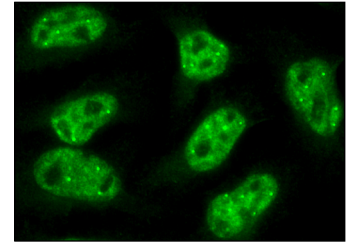
STORAGE

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

DATA



U1 snRNP 70 (C-18): sc-9571. Western blot analysis of U1 snRNP 70 expression in Hep G2 (A), HeLa (B), HEK293 (C), MCF7 (D), CCRF-CEM (E) and K-562 (F) whole cell lysates.



U1 snRNP 70 (C-18): sc-9571. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Zhou, C., et al. 2002. Association of herpes simplex virus type 1 ICP8 and ICP27 proteins with cellular RNA polymerase II holoenzyme. *J. Virol.* 76: 5893-5904.
- Manabe, T., et al. 2003. Induced HMGA1a expression causes aberrant splicing of Presenilin-2 pre-mRNA in sporadic Alzheimer's disease. *Cell Death Differ.* 10: 698-708.
- Legrand, A., et al. 2004. Study of the effects of interferon alpha on several human hepatoma cell lines: analysis of the signalling pathway of the cytokine and of its effects on apoptosis and cell proliferation. *Liver Int.* 24: 147-160.
- Kanai, Y., et al. 2004. Kinesin transports RNA: isolation and characterization of an RNA-transporting granule. *Neuron* 43: 513-525.
- Denis, M.M., et al. 2005. Escaping the nuclear confines: signal-dependent pre-mRNA splicing in anucleate platelets. *Cell* 122: 379-391.
- Chang, P.C., et al. 2006. DDX3, a DEAD box RNA helicase, is deregulated in hepatitis virus-associated hepatocellular carcinoma and is involved in cell growth control. *Oncogene* 25: 1991-2003.
- Papadaki, O., et al. 2009. Control of thymic T cell maturation, deletion and egress by the RNA-binding protein HuR. *J. Immunol.* 182: 6779-6788.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **U1 snRNP 70 (C-3): sc-390899** or **U1 snRNP 70 (E-4): sc-390988**, our highly recommended monoclonal alternatives to U1 snRNP 70 (C-18).