

hnRNP U (G-18): sc-30738

BACKGROUND

RNA polymerase II transcripts are complexed with hnRNP (heterogeneous nuclear ribonucleoprotein) proteins, which are involved in several aspects of hnRNA maturation and transport. The hnRNP particle U (also designated SAF-A, for scaffold attachment factor, and SP120) is an abundant nucleoplasmic phosphoprotein and the largest of the major hnRNP proteins. hnRNP U is specifically involved in pre-mRNA processing and is directly bound to both RNA and DNA. Specifically, hnRNP U has a high affinity to the SAR (scaffold attachment region) of DNA. hnRNP U also functions as an RNA polymerase elongation inhibitor by inhibiting TFIIF-mediated phosphorylation of the carboxy-terminal domain of Pol II. Identical to GRIP120, hnRNP U also associates with glucocorticoid receptors to inhibit glucocorticoid induction.

REFERENCES

1. Kiledjian, M. and Dreyfuss, G. 1992. Primary structure and binding activity of the hnRNP U protein: binding RNA through RGG box. *EMBO J.* 11: 2655-2664.
2. Fackelmayer, F.O. and Richter, A. 1994. hnRNP-U/SAF-A is encoded by two differentially polyadenylated mRNAs in human cells. *Biochim. Biophys. Acta* 1217: 232-234.
3. Eggert, M., et al. 1997. The glucocorticoid receptor is associated with the RNA-binding nuclear matrix protein hnRNP U. *J. Biol. Chem.* 272: 28471-28478.
4. Gohring, F. and Fackelmayer, F.O. 1997. The scaffold/matrix attachment region binding protein hnRNP-U (SAF-A) is directly bound to chromosomal DNA *in vivo*; a chemical cross linking study. *Biochemistry* 36: 8276-8283.
5. Gupta, A.K., et al. 1998. Specific interaction of heterogeneous nuclear ribonucleoprotein particle U with the leader RNA sequence of vesicular stomatitis virus. *J. Virol.* 72: 8532-8540.
6. Mattern, K.A., et al. 1999. Spatial organization of four hnRNP proteins in relation to sites of transcription, to nuclear speckles, and to each other in interphase nuclei and nuclear matrices of HeLa cells. *Exp. Cell Res.* 246: 461-470.

CHROMOSOMAL LOCATION

Genetic locus: HNRPU (human) mapping to 1q44; Hnrpu (mouse) mapping to 1 H4.

SOURCE

hnRNP U (G-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of hnRNP U 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-30738 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

hnRNP U (G-18) is recommended for detection of hnRNP U 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).

hnRNP U (G-18) is also recommended for detection of hnRNP U in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for hnRNP U siRNA (h): sc-38298, hnRNP U siRNA (m): sc-38299, hnRNP U shRNA Plasmid (h): sc-38298-SH, hnRNP U shRNA Plasmid (m): sc-38299-SH, hnRNP U shRNA (h) Lentiviral Particles: sc-38298-V and hnRNP U shRNA (m) Lentiviral Particles: sc-38299-V.

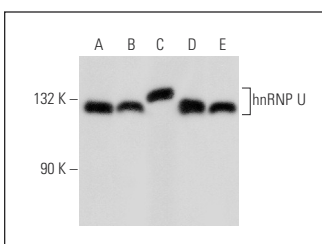
Molecular Weight of hnRNP U: 142 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HeLa nuclear extract: sc-2120 or Jurkat nuclear extract: sc-2132.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



hnRNP U (G-18): sc-30738. Western blot analysis of hnRNP U expression in U-251-MG (A), HeLa (B) and MCF7 (C) whole cell lysates and HeLa (D) and Jurkat (E) nuclear extracts.

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.