

# hnRNP U (H-94): sc-25374

## 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 TFIH-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.
7. Kim, M.K. and Vikodem, V.M. 1999. hnRNP U inhibits carboxy-terminal domain phosphorylation by TFIH and represses RNA polymerase II elongation. *Mol. Cell. Biol.* 19: 6833-6844.

## CHROMOSOMAL LOCATION

Genetic locus: HNRNPU (human) mapping to 1q44; Hnrnpu (mouse) mapping to 1 H4.

## SOURCE

hnRNP U (H-94) is a rabbit polyclonal antibody raised against amino acids 731-824 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.

## APPLICATIONS

hnRNP U (H-94) 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).

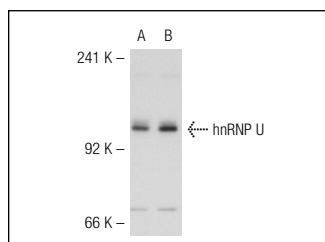
hnRNP U (H-94) is also recommended for detection of hnRNP U in additional species, including equine, canine and bovine.

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.

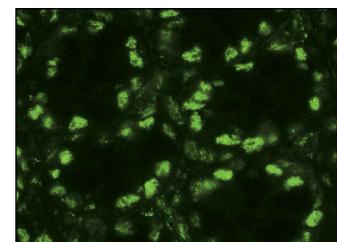
Molecular Weight of hnRNP U: 142 kDa.

Positive Controls: hnRNP U (h): 293T Lysate: sc-113957, K-562 nuclear extract: sc-2130 or Jurkat nuclear extract: sc-2132.

## DATA



hnRNP U (H-94): sc-25374. Western blot analysis of hnRNP U expression in non-transfected: sc-117752 (A) and human hnRNP U transfected: sc-113957 (B) 293T whole cell lysates.



hnRNP U (H-94): sc-25374. Immunofluorescence staining of normal mouse intestine frozen section showing nuclear staining.

## SELECT PRODUCT CITATIONS

1. Fu, D. et al. 2007. Purification of human telomerase complexes identifies factors involved in telomerase biogenesis and telomere length regulation. *Mol. Cell* 28: 773-785.
2. Lin, R.K., et al. 2010. The tobacco-specific carcinogen NNK induces DNA methyltransferase 1 accumulation and tumor suppressor gene hypermethylation in mice and lung cancer patients. *J. Clin. Invest.* 120: 521-532.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.