

# hnRNP U (D-2): sc-365852

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

hnRNP U (D-2) is a mouse monoclonal antibody raised against amino acids 731-824 of hnRNP U of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## 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.

## APPLICATIONS

hnRNP U (D-2) is recommended for detection of hnRNP U of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

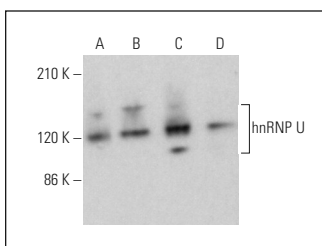
Molecular Weight of hnRNP U: 142 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, MDA-MB-231 cell lysate: sc-2232 or A-10 cell lysate: sc-3806.

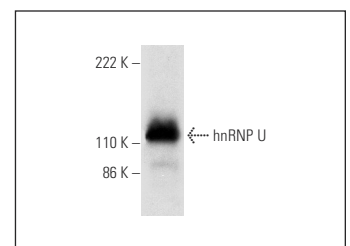
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



hnRNP U (D-2): sc-365852. Western blot analysis of hnRNP U expression in MDA-MB-231 (A), NIH/3T3 (B), TK-1 (C) and A-10 (D) whole cell lysates.



hnRNP U (D-2): sc-365852. Western blot analysis of hnRNP U expression in Jurkat nuclear extract.

## SELECT PRODUCT CITATIONS

1. Jiao, W., et al. 2018. HPSE enhancer RNA promotes cancer progression through driving chromatin looping and regulating hnRNP/p300/EGR1/HPSE axis. *Oncogene* 37: 2728-2745.



See **hnRNP U (3G6): sc-32315** for hnRNP U antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.