SANTA CRUZ BIOTECHNOLOGY, INC.

hnRNP C1/C2 (N-16): sc-10037

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Heterogeneous nuclear ribonucleoproteins (hnRNPs) constitute a set of polypeptides that contribute to pre-mRNA processing and transport, and also bind heterogeneous nuclear RNA (hnRNA), which are the transcripts produced by RNA polymerase II. hnRNP complexes are the major constituents of the spliceosome and in particular, the hnRNP A1 protein is one of the major pre-mRNA/mRNA binding proteins and also one of the most abundant proteins in the nucleus. hnRNP A1 and A2/B1 regulate the processing of pre-mRNA by directly antagonizing the association of various splicing factors and by influencing the splice site selection on pre-mRNA. The majority of hnRNP proteins components are localized to the nucleus; however some shuttle between the nucleus and the cytoplasm. Most hnRNP proteins, including hnRNP C1 and C2, contain one or more RNA binding domains and are implicated in the processing of pre-mRNA. hnRNPs F and H are largely related factors that preferentially associate with poly(rG) regions on RNA. Isoforms of these proteins are often generated by alternative processing of the pre-mRNA and by posttranslational modifications such as phosphorylation on serines and threonines and methylation of arginines.

REFERENCES

1. Swanson, M.S., et al. 1987. Primary structure of human nuclear ribonucleoprotein particle C proteins. Mol. Cell. Biol. 7: 1731-1739.
2. Gorlach, M., et al. 1994. The determinants of RNA-binding specificity of the heterogeneous nuclear ribonucleoprotein C proteins. J. Biol. Chem. 269: 23074-23078.
3. Badolato, J., et al. 1995. Identification and characterization of a novel human RNA-binding protein. Gene 166: 323-327.

CHROMOSOMAL LOCATION

Genetic locus: HNRPC (human) mapping to 14q11.2; Hnrpc (mouse) mapping to 14 C2.

SOURCE

hnRNP C1/C2 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of of hnRNP C1/C2 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-10037 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 C1/C2 (N-16) is recommended for detection of hnRNP C1, hnRNP C2 and hnRNP CL1 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).

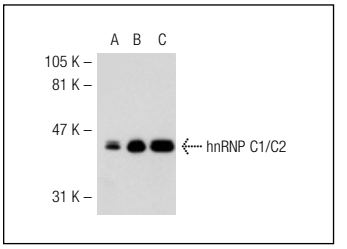
hnRNP C1/C2 (N-16) is also recommended for detection of hnRNP C1, hnRNP C2 and hnRNP CL1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for hnRNP C1/C2 siRNA (h): sc-35577, hnRNP C1/C2 siRNA (m): sc-35578, hnRNP C1/C2 shRNA Plasmid (h): sc-35577-SH, hnRNP C1/C2 shRNA Plasmid (m): sc-35578-SH, hnRNP C1/C2 shRNA (h) Lentiviral Particles: sc-35577-V and hnRNP C1/C2 shRNA (m) Lentiviral Particles: sc-35578-V.

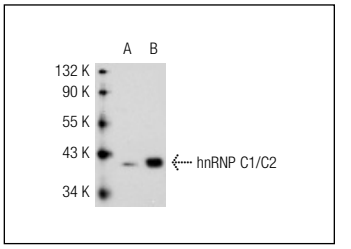
Molecular Weight of hnRNP C1/C2: 40 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, mouse liver tissue or K-562 nuclear extract: sc-2130.

DATA



hnRNP C1/C2 (N-16): sc-10037. Western blot analysis of hnRNP C1/C2 expression in non-transfected 293T: sc-117752 (**A**), human hnRNP C1/C2 transfected 293T: sc-112112 (**B**) and Jurkat (**C**) whole cell lysates.



hnRNP C1/C2 (N-16): sc-10037. Western blot analysis of hnRNP C1/C2 expression in non-transfected: sc-117752 (**A**) and human hnRNP C1/C2 transfected: sc-111776 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Stone, J.R., et al. 2002. Rapid phosphorylation of heterogeneous nuclear ribonucleoprotein C1/C2 in response to physiologic levels of hydrogen peroxide in human endothelial cells. J. Biol. Chem. 277: 15621.
2. Seko, Y., et al. 2004. Selective cytoplasmic translocation of HuR and site-specific binding to the interleukin-2 mRNA are not sufficient for CD28-mediated stabilization of the mRNA. J Biol Chem. 279: 33359-33367.
3. Lee, H.H., et al. 2004. Nuclear efflux of heterogeneous nuclear ribonucleoprotein C1/C2 in apoptotic cells: a novel nuclear export dependent on Rho-associated kinase activation. J. Cell Sci. 117: 5579-5589.
4. Tong, X., et al. 2007. Apigenin prevents UVB-induced cyclooxygenase 2 expression: coupled mRNA stabilization and translational inhibition. Mol. Cell. Biol. 27: 283-296.
5. László, C.F., et al. 2009. The role of translational regulation in ultraviolet C light-induced cyclooxygenase-2 expression. Life Sci. 85: 70-76.