

hnRNP A3 (A-15): sc-16542

BACKGROUND

Heterogeneous nuclear ribonucleoproteins (hnRNPs) constitute a set of polypeptides that contribute to mRNA transcription and pre-mRNA processing as well as mature mRNA transport to the cytoplasm and translation. They also bind heterogeneous nuclear RNA (hnRNA), which are the transcripts produced by RNA polymerase II. There are approximately 20 known hnRNP proteins, and their complexes are the major constituents of the spliceosome. The majority of hnRNP protein components are localized to the nucleus; however some shuttle between the nucleus and the cytoplasm. The A/B subfamily of hnRNPs include A1, A2/B1, A3 and A0, and in *Xenopus*, hnRNP A1, A2 and A3 are ubiquitously expressed throughout development as well as in adult tissues. 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 hnRNP A0 gene is distinct from the other A/B family members, and it encodes a low-abundance protein, which is implicated in mRNA stability.

REFERENCES

1. Good, P. J., et al. 1993. Three new members of the RNP protein family in *Xenopus*. *Nucleic Acids Res.* 21: 999-1006.
2. Badolato, J., et al. 1995. Identification and characterisation of a novel human RNA-binding protein. *Gene* 166: 323-337.
3. Siomi, H., et al. 1995. A nuclear localization domain in the hnRNP A1 protein. *J. Cell Biol.* 129: 551-560.
4. Myer, V.E., et al. 1995. Isolation and characterization of a novel, low abundance hnRNP protein: A0. *RNA* 1: 171-182.
5. Hanamura, A., et al. 1998. Regulated tissue-specific expression of antagonistic pre-mRNA splicing factors. *RNA* 4: 430-444.
6. Kim, J.H., et al. 2000. Protein-protein interaction among hnRNPs shuttling between nucleus and cytoplasm. *J. Mol. Biol.* 298: 395-405.
7. Melcak, I., et al. 2000. Nuclear pre-mRNA compartmentalization: trafficking of released transcripts to splicing factor reservoirs. *Mol. Biol. Cell.* 11: 497-510.

CHROMOSOMAL LOCATION

Genetic locus: HNRNPA3 (human) mapping to 2q31.2; Hnrnpa3 (mouse) mapping to 2 C3.

SOURCE

hnRNP A3 (A-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of hnRNP A3 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-16542 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

hnRNP A3 (A-15) is recommended for detection of hnRNP A3 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 A3 siRNA (h): sc-38262, hnRNP A3 shRNA Plasmid (h): sc-38262-SH and hnRNP A3 shRNA (h) Lentiviral Particles: sc-38262-V.

Molecular Weight of hnRNP A3: 40 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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) 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.

SELECT PRODUCT CITATIONS

1. Cristea, I.M., et al. 2006. Tracking and elucidating alphavirus-host protein interactions. *J. Biol. Chem.* 281: 30269-30278.

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 or our catalog for detailed protocols and support products.