

Snurportin-1 (F-2): sc-166006

BACKGROUND

Snurportin-1, also known as SNUPN, KPNBL or RNUT1 (RNA U transporter 1), is a nuclear import adaptor protein belonging to the Snurportin family. Localizing to the cytoplasm and nucleus, Snurportin-1 contains an N-terminal IBB domain and a trimethylguanosine (m3G)-cap binding domain. It specifically binds the terminal 2,2,7-m3G-cap at the 5' end of U snRNPs and functions to transport U snRNPs into the nucleus via an association with Importin β . The nuclear import of U snRNPs is an important step in the maturation of the spliceosome. The complex formed between Snurportin-1, U snRNP and Importin β is essential for nuclear import. Depending on the U snRNP (U1 or U2), Snurportin-1 may localize to Cajal bodies after nuclear import. In the nucleus, CRM1 binds to Snurportin-1 and is responsible for the recycling of Snurportin-1 back to the cytoplasm for additional rounds of U snRNP import.

REFERENCES

1. Paraskeva, E., et al. 1999. CRM1-mediated recycling of Snurportin-1 to the cytoplasm. *J. Cell Biol.* 145: 255-264.
2. Mouaikel, J., et al. 2003. Interaction between the small-nuclear-RNA cap hypermethylase and the spinal muscular atrophy protein, survival of motor neuron. *EMBO Rep.* 4: 616-622.
3. Julien, C., et al. 2003. Nuclear export of ERK3 by a CRM1-dependent mechanism regulates its inhibitory action on cell cycle progression. *J. Biol. Chem.* 278: 42615-42624.
4. Mans, B.J., et al. 2004. Comparative genomics, evolution and origins of the nuclear envelope and nuclear pore complex. *Cell Cycle* 3: 1612-1637.

CHROMOSOMAL LOCATION

Genetic locus: SNUPN (human) mapping to 15q24.2; Snupn (mouse) mapping to 9 B.

SOURCE

Snurportin-1 (F-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 11-43 at the N-terminus of snurportin-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Snurportin-1 (F-2) is available conjugated to agarose (sc-166006 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166006 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166006 PE), fluorescein (sc-166006 FITC), Alexa Fluor® 488 (sc-166006 AF488), Alexa Fluor® 546 (sc-166006 AF546), Alexa Fluor® 594 (sc-166006 AF594) or Alexa Fluor® 647 (sc-166006 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166006 AF680) or Alexa Fluor® 790 (sc-166006 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166006 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Snurportin-1 (F-2) is recommended for detection of Snurportin-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Snurportin-1 (F-2) is also recommended for detection of Snurportin-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Snurportin-1 siRNA (h): sc-63048, Snurportin-1 siRNA (m): sc-63049, Snurportin-1 shRNA Plasmid (h): sc-63048-SH, Snurportin-1 shRNA Plasmid (m): sc-63049-SH, Snurportin-1 shRNA (h) Lentiviral Particles: sc-63048-V and Snurportin-1 shRNA (m) Lentiviral Particles: sc-63049-V.

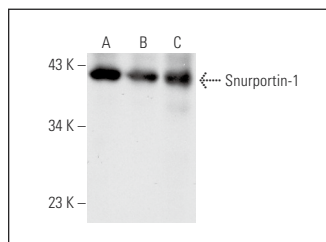
Molecular Weight of Snurportin-1: 46 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, KNRK whole cell lysate: sc-2214 or IMR-32 nuclear extract: sc-2148.

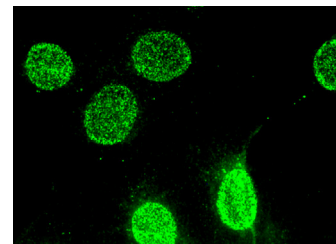
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



Snurportin-1 (F-2): sc-166006. Western blot analysis of Snurportin-1 expression in IMR-32 nuclear extract (A), Jurkat (B) and KNRK (C) whole cell lysates.



Snurportin-1 (F-2): sc-166006. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

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.

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