SANTA CRUZ BIOTECHNOLOGY, INC.

Snurportin-1 (B-12): sc-137133

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

Snurportin-1 (B-12) 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 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-137133 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Snurportin-1 (B-12) 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 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).

Snurportin-1 (B-12) 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.

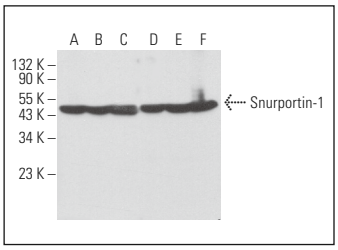
Molecular Weight of Snurportin-1: 46 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or IMR-32 cell lysate: sc-2409.

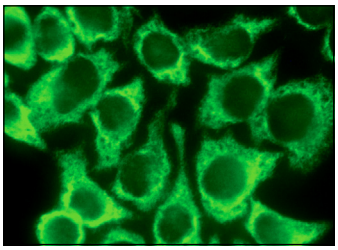
RECOMMENDED SUPPORT REAGENTS

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



Snurportin-1 (B-12): sc-137133. Western blot analysis of Snurportin-1 expression in IMR-32 (**A**), SH-SY5Y (**B**), HeLa (**C**), EOC 20 (**D**), C6 (**E**) and F9 (**F**) whole cell lysates.



Snurportin-1 (B-12): sc-137133. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Yu, Y., et al. 2015. U1 snRNP is mislocalized in ALS patient fibroblasts bearing NLS mutations in FUS and is required for motor neuron outgrowth in zebrafish. Nucleic Acids Res. 43: 3208-3218.

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 for detailed protocols and support products.