SANTA CRUZ BIOTECHNOLOGY, INC.

NXT-2 (S-15): sc-168805

BACKGROUND

Protein transport across the nucleus is a selective, multistep process involving several cytoplasmic factors including Ran. Nuclear transport factor 2 (NTF2) regulates Ran function in a non-catalytic fashion and mediates Ran-GDP targeting to the nucleus. Nucleotide-dependent conformations of Ran alter the site of interaction that would otherwise permit the binding of NTF2 to Ran-GTP. A member of the NXT family, NXT-2 (NTF2-related export protein 2) is a 142 amino acid protein containing an NTF2 domain. NXT-2 shuttles between the nucleus and the cytoplasm, regulating protein export for NES-containing proteins. NXT-2 also plays a role in mRNA nuclear export and associates with TAP, NXF2, NXF3 and NXF5. Four isoforms are produced by alternative splicing events.

REFERENCES

1. Smith, A., et al. 1998. Nuclear import of Ran is mediated by the transport factor NTF2. Curr. Biol. 8: 1403-1406.
2. Ribbeck, K., et al. 1998. NTF2 mediates nuclear import of Ran. EMBO J. 17: 6587-6598.
3. Black, B.E., et al. 1999. Identification of an NTF2-related factor that binds Ran-GTP and regulates nuclear protein export. Mol. Cell. Biol. 19: 8616-8624.
4. Ossareh-Nazari, B., et al. 2000. RanGTP-binding protein NXT1 facilitates nuclear export of different classes of RNA *in vitro*. Mol. Cell. Biol. 20: 4562-4571.
5. Herold, A., et al. 2000. TAP (NXF1) belongs to a multigene family of putative RNA export factors with a conserved modular architecture. Mol. Cell. Biol. 20: 8996-9008.
6. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 300320. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/300320
7. Huang, H., et al. 2005. NXT2 is required for embryonic heart development in zebrafish. BMC Dev. Biol. 5: 7.

CHROMOSOMAL LOCATION

Genetic locus: NXT2 (human) mapping to Xq23.

SOURCE

NXT-2 (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NXT-2 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-168805 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.

APPLICATIONS

NXT-2 (S-15) is recommended for detection of NXT-2 of human 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); non cross-reactive with NXT-1.

Suitable for use as control antibody for NXT-2 siRNA (h): sc-91277, NXT-2 shRNA Plasmid (h): sc-91277-SH and NXT-2 shRNA (h) Lentiviral Particles: sc-91277-V.

Molecular Weight of NXT-2 isoforms 1/2/3/4: 16/21/23/13 kDa.

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.

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.