SANTA CRUZ BIOTECHNOLOGY, INC.

Importin-12 (H-300): sc-98826



BACKGROUND

The Importin complex consists of Importin- α and Importin- β proteins which assist in transport of arginine- or serine-rich (SR) proteins across the nucleus. Importin-12, also known as transportin-3 or transportin-SR, is a member of the Importin- β family and functions as a nuclear transport receptor for serine/ arginine-rich proteins. Through recognition of phosphorylated RS domains, Importin-12 mediates the nuclear import of several SR proteins, such as splicing factors SFRS1 and SFRS2. By regulating the nucleocytoplasmic transport of these and other SR mRNA splicing factors, Importin-12 controls their access to mRNA and, therefore, acts a transcriptional regulator.

REFERENCES

- 1. Kataoka, N., Bachorik, J.L. and Dreyfuss, G. 1999. Transportin-SR, a nuclear import receptor for SR proteins. J. Cell Biol. 145: 1145-1152.
- 2. Lai, M.C., Lin, R.I., Huang, S.Y., Tsai, C.W. and Tarn, W.Y. 2000. A human Importin- β family protein, transportin-SR2, interacts with the phosphory-lated RS domain of SR proteins. J. Biol. Chem. 275: 7950-7957.
- 3. Zhang, C., Sweezey, N.B., Gagnon, S., Muskat, B., Koehler, D., Post, M. and Kaplan, F. 2000. A novel karyopherin β homolog is developmentally and hormonally regulated in fetal lung. Am. J. Respir. Cell Mol. Biol. 22: 451-459.
- Lai, M.C., Lin, R.I. and Tarn, W.Y. 2001. Transportin-SR2 mediates nuclear import of phosphorylated SR proteins. Proc. Natl. Acad. Sci. USA 98: 10154-10159.
- Allemand, E., Dokudovskaya, S., Bordonné, R. and Tazi, J. 2002. A conserved *Drosophila* transportin-serine/arginine-rich (SR) protein permits nuclear import of *Drosophila* SR protein splicing factors and their antagonist repressor splicing factor 1. Mol. Biol. Cell 13: 2436-2447.
- Lai, M.C., Kuo, H.W., Chang, W.C. and Tarn, W.Y. 2003. A novel splicing regulator shares a nuclear import pathway with SR proteins. EMBO J. 22: 1359-1369.
- Hamelberg, D., Shen, T. and McCammon, J.A. 2007. A proposed signaling motif for nuclear import in mRNA processing via the formation of arginine claw. Proc. Natl. Acad. Sci. USA 104: 14947-14951.

CHROMOSOMAL LOCATION

Genetic locus: TNPO3 (human) mapping to 7q32.1; Tnpo3 (mouse) mapping to 6 A3.3.

SOURCE

Importin-12 (H-300) is a goat polyclonal antibody raised against amino acids 601-900 mapping near the C-terminus of Importin-12 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.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

Importin-12 (H-300) is recommended for detection of Importin-12 of mouse, rat and 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).

Importin-12 (H-300) is also recommended for detection of Importin-12 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Importin-12 siRNA (h): sc-89750, Importin-12 siRNA (m): sc-105574, Importin-12 shRNA Plasmid (h): sc-89750-SH, Importin-12 shRNA Plasmid (m): sc-105574-SH, Importin-12 shRNA (h) Lentiviral Particles: sc-89750-V and Importin-12 shRNA (m) Lentiviral Particles: sc-105574-V.

Molecular Weight of Importin-12: 110 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) Immunofluo-rescence: 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.

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS Satisfation Guaranteed

Try **Importin-12 (C-2):** sc-376346, our highly recommended monoclonal alternative to Importin-12 (H-300).