

Importin-12 (T-14): sc-104331

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 phosphorylated 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.
4. 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.
5. 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.
6. 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.
7. 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; Tnp3 (mouse) mapping to 6 A3.3.

SOURCE

Importin-12 (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Importin-12 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-104331 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Importin-12 (T-14) 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), 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); non cross-reactive with other Importin family members.

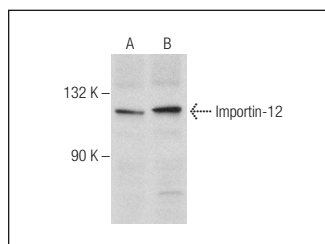
Importin-12 (T-14) is also recommended for detection of Importin-12 in additional species, including canine, bovine, porcine and avian.

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) Lenti-viral Particles: sc-105574-V.

Molecular Weight of Importin-12: 110 kDa.

Positive Controls: Ramos cell lysate: sc-2216 or Jurkat whole cell lysate: sc-2204.

DATA



Importin-12 (T-14): sc-104331. Western blot analysis of Importin-12 expression in Ramos (A) and Jurkat (B) whole cell lysates.

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.

MONOS
Satisfaction
Guaranteed

Try **Importin-12 (C-2): sc-376346**, our highly recommended monoclonal alternative to Importin-12 (T-14).