

Importin-8 (N-18): sc-74668

BACKGROUND

The Importin complex consists of Importin- α and Importin- β proteins which assist in the transport of arginine- or serine-rich (SR) peptides across the nucleus. Importin-8, also known as IPO8 or Ran BP-8, is a 1,037 amino acid protein that localizes to both the nucleus and the cytoplasm and contains one importin N-terminal domain. One of several members of the Importin- β family, Importin-8 functions as a target for Ran (a GTPase) and is thought to play a role in nuclear protein import, acting as either an adaptor-like protein or as an autonomous nuclear transport receptor. When acting as an adaptor-like protein, Importin-8 binds to Ran at the nucleoplasmic side of the nuclear pore complex (NPC) and initiates the dissociation of the importin complex, an event that releases the target substrate into the nucleus. Importin-8 may exist alone or as a heterodimer with karyopherin β 1, another member of the Importin- β family.

REFERENCES

1. Nakielnny, S., et al. 1996. Transportin: nuclear transport receptor of a novel nuclear protein import pathway. *Exp. Cell Res.* 229: 261-266.
2. Görlich, D., et al. 1997. A novel class of RanGTP binding proteins. *J. Cell Biol.* 138: 65-80.
3. Jäkel, S. and Görlich, D. 1998. Importin- β , transportin, Ran BP-5 and Ran BP-7 mediate nuclear import of ribosomal proteins in mammalian cells. *EMBO J.* 17: 4491-4502.
4. Dean, K.A., et al. 2001. Signal recognition particle protein 19 is imported into the nucleus by Importin-8 (Ran BP-8) and transportin. *J. Cell Sci.* 114: 3479-3485.
5. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 605600. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Maity, T.S., et al. 2006. Compartmentalization directs assembly of the signal recognition particle. *Biochemistry* 45: 14955-14964.

CHROMOSOMAL LOCATION

Genetic locus: IPO8 (human) mapping to 12p11.21; lpo8 (mouse) mapping to 6 G3.

SOURCE

Importin-8 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Importin-8 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-74668 P, (100 μ g 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

Importin-8 (N-18) is recommended for detection of Importin-8 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).

Importin-8 (N-18) is also recommended for detection of Importin-8 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Importin-8 siRNA (h): sc-75336, Importin-8 siRNA (m): sc-75337, Importin-8 shRNA Plasmid (h): sc-75336-SH, Importin-8 shRNA Plasmid (m): sc-75337-SH, Importin-8 shRNA (h) Lentiviral Particles: sc-75336-V and Importin-8 shRNA (m) Lentiviral Particles: sc-75337-V.

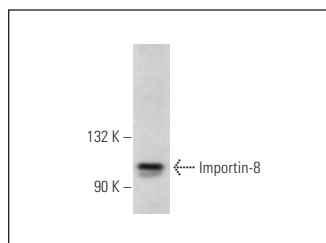
Molecular Weight of Importin-8: 120 kDa.

Positive Controls: K-562 nuclear extract: sc-2130.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Importin-8 (N-18): sc-74668. Western blot analysis of Importin-8 expression in K-562 nuclear extract.

RESEARCH USE

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



Try **Importin-8 (C-5): sc-398854**, our highly recommended monoclonal alternative to Importin-8 (N-18).