

Exportin 4 (V-18): sc-13423

BACKGROUND

Exportins preferentially bind their substrates at high RanGTP concentrations in the nucleus and then exit the nucleus as trimeric cargo-Exportin-RanGTP complexes. The disassembly of the Exportin-RanGTP complexes involves RanGAP and either RanBP1 or RanBP2, and frees the Exportins for additional nuclear exports. Exportin 1 (soluble cellular export receptor) is a receptor for leucine-rich export sequences and mediates nucleocytoplasmic translocation of Rev-HIV RNA complexes through the nuclear pore. Exportin T binds to functional tRNA and mediates tRNA export from the nucleus. Exportin 4 mediates nuclear export of the eukaryotic translation initiation factor 5A (eIF-5A) by means of a hypusine modification unique to eIF-5A. While a distant member of the importin β superfamily, Exportin 4 shares an N-terminal RanGTP-binding motif with Exportin 1 and Exportin T.

REFERENCES

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- Lipowsky, G., Bischoff, F.R., Izaurralde, E., Kutay, U., Schafer, S., Gross, H.J., Beier, H. and Gorlich, D. 1999. Coordination of tRNA nuclear export with processing of tRNA. *RNA* 5: 539-549.
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- Lipowsky, G., Bischoff, F.R., Schwarzmaier, P., Kraft, R., Kostka, S., Hartmann, E., Kuray, U. and Görllich, D. 2000. Exportin 4: a mediator of a novel nuclear export pathway in higher eukaryotes. *EMBO J.* 19: 4362-4371.

CHROMOSOMAL LOCATION

Genetic locus: XPO4 (human) mapping to 13q12.11; Xpo4 (mouse) mapping to 14 C3.

SOURCE

Exportin 4 (V-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Exportin 4 of mouse origin.

STORAGE

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

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-13423 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Exportin 4 (V-18) is recommended for detection of Exportin 4 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).

Exportin 4 (V-18) is also recommended for detection of Exportin 4 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for Exportin 4 siRNA (h): sc-41273, Exportin 4 siRNA (m): sc-41274, Exportin 4 shRNA Plasmid (h): sc-41273-SH, Exportin 4 shRNA Plasmid (m): sc-41274-SH, Exportin 4 shRNA (h) Lentiviral Particles: sc-41273-V and Exportin 4 shRNA (m) Lentiviral Particles: sc-41274-V.

Molecular Weight of Exportin 4: 130 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.

SELECT PRODUCT CITATIONS

- Kurisaki, A., Kurisaki, K., Kowanetz, M., Sugino, H., Yoneda, Y., Heldin, C.H. and Moustakas, A. 2006. The mechanism of nuclear export of Smad3 involves Exportin 4 and Ran. *Mol. Cell Biol.* 26: 1318-1332.
- Gontan, C., Güttler, T., Engelen, E., Demmers, J., Fornerod, M., Grosveld, F.G., Tibboel, D., Görllich, D., Poot, R.A. and Rottier, R.J. 2009. Exportin 4 mediates a novel nuclear import pathway for Sox family transcription factors. *J. Cell Biol.* 185: 27-34.

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.