

karyopherin β 3 (H-300): sc-11369

BACKGROUND

Protein transport across the nucleus is a selective, multi-step process involving several cytoplasmic factors. Proteins must be recognized as import substrates, dock at the nuclear pore complex and translocate across the nuclear envelope in an ATP-dependent fashion. Two cytosolic factors centrally involved in the recognition and docking process are the karyopherin α 1 and karyopherin β 1 subunits. Karyopherin α 1 functions in the recognition and targeting of substrates destined for nuclear import, while karyopherin β 1 serves as an adapter, tethering the karyopherin β 1/substrate complex to docking proteins on the nuclear envelope termed nucleoporins. Karyopherin α 2 has been shown to complex with Epstein-Barr virus nuclear antigen 1 (EBNA1). Certain RNA-binding proteins are imported to the nucleus by karyopherin β 2, and karyopherin β 3 appears to be involved in the import of some ribosomal proteins.

CHROMOSOMAL LOCATION

Genetic locus: KPNB3 (human) mapping to 13q32.2; Ranbp5 (mouse) mapping to 14 E5.

SOURCE

karyopherin β 3 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of karyopherin β 3 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.

APPLICATIONS

karyopherin β 3 (H-300) is recommended for detection of karyopherin β 3 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

karyopherin β 3 (H-300) is also recommended for detection of karyopherin β 3 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for karyopherin β 3 siRNA (h): sc-35740, karyopherin β 3 siRNA (m): sc-35739, karyopherin β 3 shRNA Plasmid (h): sc-35740-SH, karyopherin β 3 shRNA Plasmid (m): sc-35739-SH, karyopherin β 3 shRNA (h) Lentiviral Particles: sc-35740-V and karyopherin β 3 shRNA (m) Lentiviral Particles: sc-35739-V.

Molecular Weight of karyopherin β 3: 116 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

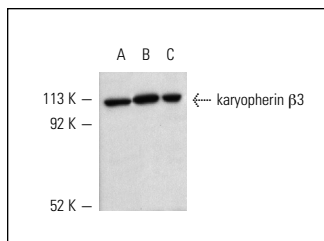
STORAGE

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

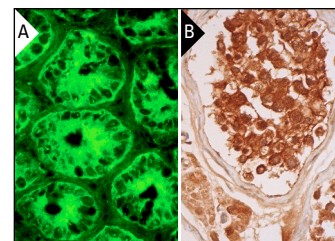
RESEARCH USE

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

DATA



karyopherin β 3 (H-300): sc-11369. Western blot analysis of karyopherin β 3 expression in HeLa (A), KNRK (B) and NIH/3T3 (C) whole cell lysates.



karyopherin β 3 (H-300): sc-11369 Immunofluorescence staining of normal mouse intestine frozen section showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and nuclear staining of cells in seminiferous ducts and Leydig cells (B).

SELECT PRODUCT CITATIONS

- Ross, A.E., et al. 2003. Overlapping signals for protein degradation and nuclear localization define a role for intrinsic RAG-2 nuclear uptake in dividing cells. *Mol. Cell. Biol.* 23: 5308-5319.
- Loveland, K.L., et al. 2006. Expression of nuclear transport importins β 1 and β 3 is regulated during rodent spermatogenesis. *Biol. Reprod.* 74: 67-74.
- Deng, T., et al. 2006. Role of Ran binding protein 5 in nuclear import and assembly of the influenza virus RNA polymerase complex. *J. Virol.* 80: 11911-11919.
- Hogarth, C.A., et al. 2007. Subcellular distribution of importins correlates with germ cell maturation. *Dev. Dyn.* 236: 2311-2320.
- Condjella, R., et al. 2009. The canine papillomavirus e5 protein signals from the endoplasmic reticulum. *J. Virol.* 83: 12833-12841.
- Alvarez, F., et al. 2011. Sequential establishment of marks on soluble histones H3 and H4. *J. Biol. Chem.* 286: 17714-17721.
- Bradel-Tretheway, B.G., et al. 2011. Comprehensive proteomic analysis of influenza virus polymerase complex reveals a novel association with mitochondrial proteins and RNA polymerase accessory factors. *J. Virol.* 85: 8569-8581.
- Whiley, P.A., et al. 2012. Changing subcellular localization of nuclear transport factors during human spermatogenesis. *Int. J. Androl.* 35: 158-169.



Try **karyopherin β 3 (B-7): sc-55527** or **karyopherin β 3 (A-2): sc-514122**, our highly recommended monoclonal alternatives to karyopherin β 3 (H-300).