SANTA CRUZ BIOTECHNOLOGY, INC.

karyopherin β1 (H-300): sc-11367

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Protein transport across the nucleus is a selective, multistep 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 α1 and karyopherin β1 subunits. Karyopherin α1 functions in the recognition and targeting of substrates destined for nuclear import, while karyopherin β1 serves as an adapter, tethering the karyopherin α1/substrate complex to docking proteins on the nuclear envelope termed nucleoporins. Karyopherin α2 has been shown to complex with Epstein-Barr virus nuclear antigen 1 (EBNA1). Certain RNA-binding proteins are imported to the nucleus by karyopherin β2, and karyopherin β3 appears to be involved in the import of some ribosomal proteins.

CHROMOSOMAL LOCATION

Genetic locus: KPNB1 (human) mapping to 17q21.32; Kpnb1 (mouse) mapping to 11 D.

SOURCE

karyopherin β1 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping epitope corresponding to amino acids 1-300 mapping at the N-terminus of karyopherin β1 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.

APPLICATIONS

karyopherin β1 (H-300) is recommended for detection of karyopherin β1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 β1 (H-300) is also recommended for detection of karyopherin β1 in additional species, including bovine, porcine and canine.

Suitable for use as control antibody for karyopherin β1 siRNA (h): sc-35736, karyopherin β1 siRNA (m): sc-35735, karyopherin β1 siRNA (r): sc-156145, karyopherin β1 shRNA Plasmid (h): sc-35736-SH, karyopherin β1 shRNA Plasmid (m): sc-35735-SH, karyopherin β1 shRNA Plasmid (r): sc-156145-SH, karyopherin β1 shRNA (h) Lentiviral Particles: sc-35736-V, karyopherin β1 shRNA (m) Lentiviral Particles: sc-35735-V and karyopherin β1 shRNA (r) Lentiviral Particles: sc-156145-V.

Molecular Weight of karyopherin β1: 97 kDa.

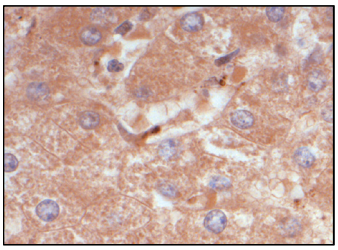
STORAGE

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 β1 (H-300): sc-11367. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human liver tissue showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

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3. Filatova, A., et al. 2009. Novel shuttling domain in a regulator (RSC1A1) of transporter SGLT1 steers cell cycle-dependent nuclear location. Traffic 10: 1599-1618.
4. van der Watt, P.J., et al. 2009. The Karyopherin proteins, Crm1 and Karyopherin β1, are overexpressed in cervical cancer and are critical for cancer cell survival and proliferation. Int. J. Cancer 124: 1829-1840.
5. Liu, H.S., et al. 2010. An unusual function of RON receptor tyrosine kinase as a transcriptional regulator in cooperation with EGFR in human cancer cells. Carcinogenesis 31: 1456-1464.
6. Bahk, Y.Y., et al. 2010. An analysis of an interactome for apoptosis factor, Ei24/PIG8, using the inducible expression system and shotgun proteomics. J. Proteome Res. 9: 5270-5283.
7. Lam, Y.W., et al. 2010. Comprehensive identification and modified-site mapping of S-nitrosylated targets in prostate epithelial cells. PLoS ONE 5: e9075.
8. Whiley, P.A., et al. 2012. Changing subcellular localization of nuclear transport factors during human spermatogenesis. Int. J. Androl. 35: 158-169.