

karyopherin α 2 (C-20): sc-6917

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 α 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: KPNA2 (human) mapping to 17q24.2; Kpna2 (mouse) mapping to 11 E1.

SOURCE

karyopherin α 2 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of karyopherin α 2 of human origin.

PRODUCT

Each vial contains 100 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-6917 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

karyopherin α 2 (C-20) is recommended for detection of karyopherin α 2 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 α 2 (C-20) is also recommended for detection of karyopherin α 2 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for karyopherin α 2 siRNA (h): sc-35741, karyopherin α 2 siRNA (m): sc-35742, karyopherin α 2 shRNA Plasmid (h): sc-35741-SH, karyopherin α 2 shRNA Plasmid (m): sc-35742-SH, karyopherin α 2 shRNA (h) Lentiviral Particles: sc-35741-V and karyopherin α 2 shRNA (m) Lentiviral Particles: sc-35742-V.

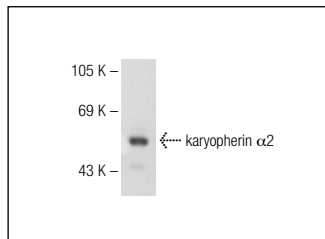
Molecular Weight of karyopherin α 2: 52 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, NIH/3T3 whole cell lysate: sc-2210 or HeLa whole cell lysate: sc-2200.

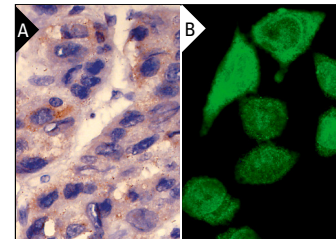
STORAGE

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

DATA



karyopherin α 2 (C-20): sc-6917. Western blot analysis of karyopherin α 2 expression in BJAB whole cell lysate.



karyopherin α 2 (C-20): sc-6917. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tumor showing cytoplasmic localization (A). Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear membrane localization (B).

SELECT PRODUCT CITATIONS

- Ciciarello, M., et al. 2004. Importin β is transported to spindle poles during mitosis and regulates Ran-dependent spindle assembly factors in mammalian cells. *J. Cell Sci.* 117: 6511-6522.
- van der Watt, P.J., et al. 2009. The Karyopherin proteins, Crm1 and Karyopherin β 1, are overexpressed in cervical cancer and are critical for cancer cell survival and proliferation. *Int. J. Cancer* 124: 1829-1840.
- 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.
- Mortezavi, A., et al. 2011. KPNA2 expression is an independent adverse predictor of biochemical recurrence after radical prostatectomy. *Clin. Cancer Res.* 17: 1111-1121.
- Jensen, J.B., et al. 2011. High expression of karyopherin- α 2 defines poor prognosis in non-muscle-invasive bladder cancer and in patients with invasive bladder cancer undergoing radical cystectomy. *Eur. Urol.* 59: 841-848.
- Whiley, P.A., et al. 2012. Changing subcellular localization of nuclear transport factors during human spermatogenesis. *Int. J. Androl.* 35: 158-169.
- Mahboubi, H., et al. 2013. Identification of novel stress granule components that are involved in nuclear transport. *PLoS ONE* 8: e68356.

RESEARCH USE

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



Try **karyopherin α 2 (B-9): sc-55538** or **karyopherin α 2 (B-9): sc-55538**, our highly recommended monoclonal alternatives to karyopherin α 2 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **karyopherin α 2 (B-9): sc-55538**.