

# karyopherin $\beta$ 2 (H-300): sc-11368

## 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  $\alpha$ 1 and karyopherin  $\beta$ 1 subunits. karyopherin  $\alpha$ 1 functions in the recognition and targeting of substrates destined for nuclear import, while karyopherin  $\beta$ 1 serves as an adapter, tethering the karyopherin  $\alpha$ 1/substrate complex to docking proteins on the nuclear envelope termed nucleoporins. karyopherin  $\alpha$ 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  $\beta$ 2, and karyopherin  $\beta$ 3 appears to be involved in the import of some ribosomal proteins.

## REFERENCES

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## CHROMOSOMAL LOCATIONS

Genetic locus: TNPO1 (human) mapping to 5q13.2; Tnp01 (mouse) mapping to 13 D1.

## SOURCE

karyopherin  $\beta$ 2 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 of karyopherin  $\beta$ 2 of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

karyopherin  $\beta$ 2 (H-300) is recommended for detection of karyopherin  $\beta$ 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

karyopherin  $\beta$ 2 (H-300) is also recommended for detection of karyopherin  $\beta$ 2 in additional species, including bovine, porcine and avian.

Suitable for use as control antibody for karyopherin  $\beta$ 2 siRNA (h): sc-35737, karyopherin  $\beta$ 2 siRNA (m): sc-35738, karyopherin  $\beta$ 2 shRNA Plasmid (h): sc-35737-SH, karyopherin  $\beta$ 2 shRNA Plasmid (m): sc-35738-SH, karyopherin  $\beta$ 2 shRNA (h) Lentiviral Particles: sc-35737-V and karyopherin  $\beta$ 2 shRNA (m) Lentiviral Particles: sc-35738-V.

Molecular Weight of karyopherin  $\beta$ 2: 55-97 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **karyopherin  $\beta$ 2/2B (A-11): sc-365179** or **karyopherin  $\beta$ 2 (F-6): sc-166127**, our highly recommended monoclonal alternatives to karyopherin  $\beta$ 2 (H-300).