

# karyopherin $\beta$ 3 (A-18): sc-84578

## 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  $\alpha$ 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.

## CHROMOSOMAL LOCATION

Genetic locus: IPO5 (human) mapping to 13q32.2; lpo5 (mouse) mapping to 14 E5.

## SOURCE

karyopherin  $\beta$ 3 (A-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of karyopherin  $\beta$ 3 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84578 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

karyopherin  $\beta$ 3 (A-18) is recommended for detection of karyopherin  $\beta$ 3 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); non cross-reactive with other karyopherin family members.

karyopherin  $\beta$ 3 (A-18) is also recommended for detection of karyopherin  $\beta$ 3 in additional species, including equine, canine, porcine and avian.

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

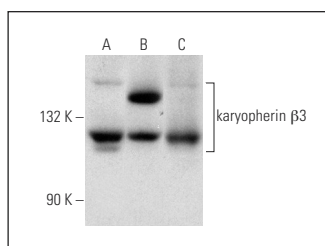
Molecular Weight of karyopherin  $\beta$ 3: 116 kDa.

Positive Controls: karyopherin  $\beta$ 3 (h): 293T Lysate: sc-173029, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

## 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) 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.

## DATA



karyopherin  $\beta$ 3 (A-18): sc-84578. Western blot analysis of karyopherin  $\beta$ 3 expression in non-transfected 293T: sc-117752 (A), human karyopherin  $\beta$ 3 transfected 293T: sc-173029 (B) and HeLa (C) whole cell lysates.

## 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.



Try **karyopherin  $\beta$ 3 (B-7): sc-55527** or **karyopherin  $\beta$ 3 (A-2): sc-514122**, our highly recommended monoclonal alternatives to karyopherin  $\beta$ 3 (A-18).