

karyopherin β 2/2B (C-20): sc-6913

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 (EBNA-1). Karyopherin β 2 and karyopherin β 2B (also designated transportin 1 and transportin 2) share 84% sequence identity at the amino acid level, however, they have been shown to have different substrate specificities. Karyopherin β 2 mediates hnRNP1 nuclear import while karyopherin β 2B has been implicated in the export of cellular mRNAs through complexes formed with the mRNA export factor TAP.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: TNPO1 (human) mapping to 5q13.2, TNPO2 (human) mapping to 19p13.2; Tnp01 (mouse) mapping to 13 D1, Tnp02 (mouse) mapping to 8 C3.

SOURCE

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

Blocking peptide available for competition studies, sc-6913 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

karyopherin β 2/2B (C-20) is recommended for detection of karyopherin β 2 and karyopherin β 2B 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 karyopherin β 1 or karyopherin β 3.

karyopherin β 2/2B (C-20) is also recommended for detection of karyopherin β 2 and karyopherin β 2B in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of karyopherin β 2/2B: 55-97 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **karyopherin β 2/2B (A-11): sc-365179** or **karyopherin β 2 (F-6): sc-166127**, our highly recommended monoclonal alternatives to karyopherin β 2/2B (C-20).