

karyopherin α 5 (1D2): sc-517105

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.

REFERENCES

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3. Bukrinsky, M.I. and Haffar, O.K. 1999. HIV-1 nuclear import: in search of a leader. *Front. Biosci.* 4: D772-D781.
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CHROMOSOMAL LOCATION

Genetic locus: KPNA5 (human) mapping to 6q22.1.

RESEARCH USE

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

SOURCE

karyopherin α 5 (1D2) is a mouse monoclonal antibody raised against amino acids 1-539 representing full length karyopherin α 5 of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

karyopherin α 5 (1D2) is recommended for detection of karyopherin α 5 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for karyopherin α 5 siRNA (h): sc-62523, karyopherin α 5 shRNA Plasmid (h): sc-62523-SH and karyopherin α 5 shRNA (h) Lentiviral Particles: sc-62523-V.

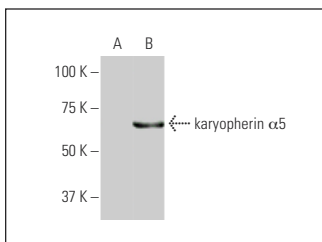
Molecular Weight of karyopherin α 5: 60 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or karyopherin α 5 transfected 293T whole cell lysate.

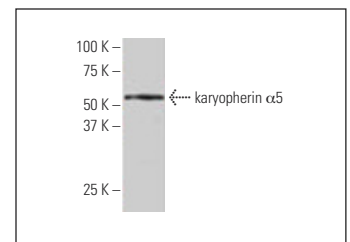
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



karyopherin α 5 (1D2): sc-517105. Western blot analysis of karyopherin α 5 expression in non-transfected (A) and karyopherin α 5 transfected (B) 293T whole cell lysates.



karyopherin α 5 (1D2): sc-517105. Western blot analysis of karyopherin α 5 expression in Hep G2 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Batra, J., et al. 2018. Protein interaction mapping identifies RBBP6 as a negative regulator of Ebola virus replication. *Cell* 175: 1917-1930.

STORAGE

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