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- Expressversand

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# karyopherin $\alpha 6$ (h): 293T Lysate: sc-173792

## BACKGROUND

Protein transport across the nucleus is a selective, multi-step process involving several cytoplasmic factors that mediate protein passage through the nuclear pore complex (NPC). Cytoplasmic proteins that contain nuclear localization signals (NLSs) must be recognized as import substrates, dock at the nuclear pore complex and translocate across the nuclear envelope in an ATP-dependent fashion. Karyopherin  $\alpha 1$  and karyopherin  $\alpha 6$  are widely expressed nuclear import proteins that act as adaptors for karyopherin  $\beta 1$ , specifically binding to and guiding NLS-containing proteins to the NPC. Both karyopherin  $\alpha 1$  and karyopherin  $\alpha 6$  contain one IBB domain and ten ARM repeats through which they convey their protein binding and localization function. Together, karyopherin  $\alpha 1$  and karyopherin  $\alpha 6$  are responsible for ensuring the nuclear import of NLS-containing substrates.

## REFERENCES

- Moroianu, J., et al. 1995. Previously identified protein of uncertain function is karyopherin  $\alpha$  and together with karyopherin  $\beta$  docks import substrate at nuclear pore complexes. *Proc. Natl. Acad. Sci. USA* 92: 2008-2011.
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- Fischer, N., et al. 1997. Epstein-Barr virus nuclear antigen 1 forms a complex with the nuclear transporter karyopherin  $\alpha 2$ . *J. Biol. Chem.* 272: 3999-4005.
- Bonifaci, N., et al. 1997. Karyopherin  $\beta 2$  mediates nuclear import of a mRNA binding protein. *Proc. Natl. Acad. Sci. USA* 94: 5055-5060.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610563. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: KPNA6 (human) mapping to 1p35.1.

## PRODUCT

karyopherin  $\alpha 6$  (h): 293T Lysate represents a lysate of human karyopherin  $\alpha 6$  transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## APPLICATIONS

karyopherin  $\alpha 6$  (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive karyopherin  $\alpha 6$  antibodies. Recommended use: 10-20  $\mu$ l per lane.

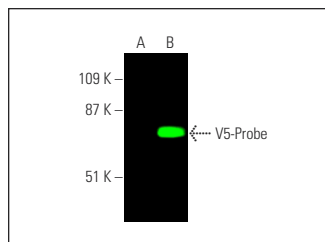
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

V5-Probe (H-9): sc-271926 is recommended as a positive control antibody for Western Blot analysis of enhanced human karyopherin  $\alpha 6$  expression in karyopherin  $\alpha 6$  transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

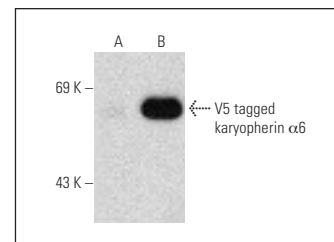
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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.

## DATA



V5-Probe (H-9): sc-271926. Near-infrared western blot analysis of V5-Probe expression in non-transfected: sc-117752 (A) and human karyopherin  $\alpha 6$  transfected: sc-173792 (B) 293T whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG $\kappa$  BP-CFL 680: sc-516180.



V5-Probe (E10): sc-81594. Western blot analysis of karyopherin  $\alpha 6$  expression in non-transfected: sc-117752 (A) and human karyopherin  $\alpha 6$  transfected: sc-173792 (B) 293T whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

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