

karyopherin 13 (A-9): sc-271560



The Power to Question

BACKGROUND

Belonging to the importin β family, karyopherin 13 (Kap13), also known as Importin-13 (IPO13) or Ran-binding protein 13, is a 963 amino acid protein that contains 20 HEAT repeats and one importin N-terminal domain. Localizing to the nucleus as well as the cytoplasm, karyopherin 13 is expressed in fetal brain, heart, intestine and kidney. Karyopherin 13 acts as a nuclear transport receptor, participating in nuclear protein import and nuclear localization signals (NLS) in cargo substrates, in a Ras-related nuclear protein-GTPase dependent system. Karyopherin 13 mediates the nuclear import and/or export of UBC9, the RBM8A/MAGOH complex, Pax-6, eIF1AY and Ran. The gene encoding karyopherin 13 maps to human chromosome 1p34.1 and mouse chromosome 4 D2.1.

REFERENCES

1. Nagase, T., et al. 1998. Prediction of the coding sequences of unidentified human genes. XI. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 5: 277-286.
2. Zhang, C., et al. 2000. A novel karyopherin- β homolog is developmentally and hormonally regulated in fetal lung. Am. J. Respir. Cell Mol. Biol. 22: 451-459.
3. Mingot, J.M., et al. 2001. Importin 13: a novel mediator of nuclear import and export. EMBO J. 20: 3685-3694.
4. Ploski, J.E., et al. 2004. Paired-type homeodomain transcription factors are imported into the nucleus by karyopherin 13. Mol. Cell. Biol. 24: 4824-4834.
5. Bono, F., et al. 2010. Nuclear import mechanism of the EJC component Mago-Y14 revealed by structural studies of importin 13. Mol. Cell 37: 211-222.
6. Grünwald, M. and Bono, F. 2011. Structure of Importin13-Ubc9 complex: nuclear import and release of a key regulator of sumoylation. EMBO J. 30: 427-438.

CHROMOSOMAL LOCATION

Genetic locus: IPO13 (human) mapping to 1p34.1; lpo13 (mouse) mapping to 4 D2.1.

SOURCE

karyopherin 13 (A-9) is a mouse monoclonal antibody raised against a peptide mapping within an internal region of karyopherin 13 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271560 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

karyopherin 13 (A-9) is recommended for detection of karyopherin 13 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 13 (A-9) is also recommended for detection of karyopherin 13 in additional species, including canine and porcine.

Suitable for use as control antibody for karyopherin 13 siRNA (h): sc-62521, karyopherin 13 siRNA (m): sc-62522, karyopherin 13 shRNA Plasmid (h): sc-62521-SH, karyopherin 13 shRNA Plasmid (m): sc-62522-SH, karyopherin 13 shRNA (h) Lentiviral Particles: sc-62521-V and karyopherin 13 shRNA (m) Lentiviral Particles: sc-62522-V.

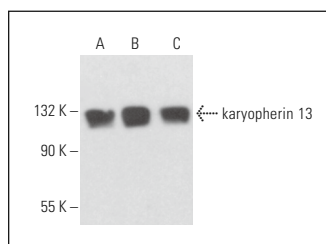
Molecular Weight of karyopherin 13: 109 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, A-673 cell lysate: sc-2414 or HeLa whole cell lysate: sc-2200.

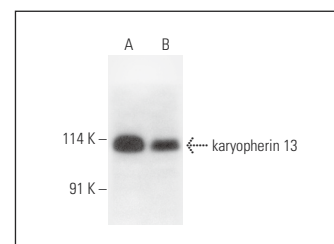
RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



karyopherin 13 (A-9): sc-271560. Western blot analysis of karyopherin 13 expression in Jurkat (A), A-673 (B) and RAW 264.7 (C) whole cell lysates.



karyopherin 13 (A-9): sc-271560. Western blot analysis of karyopherin 13 expression in Jurkat (A) and HeLa (B) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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