Technical Data Sheet

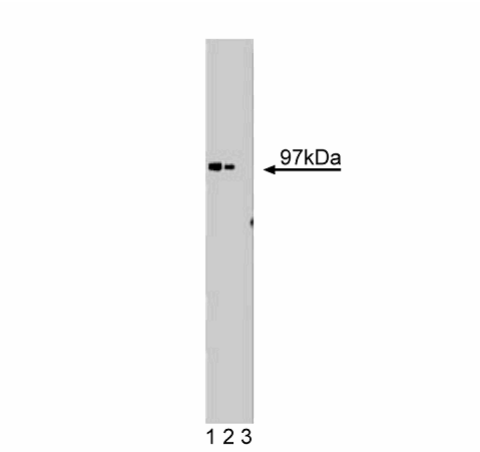
Purified Mouse Anti-Karyopherin β

Product Information

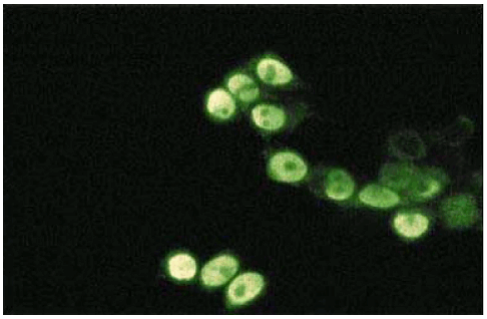
Material Number:	**610559**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	23/Karyopherin β
Immunogen:	Rat Karyopherin β aa. 48-241
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Mouse, Rat, Dog
Target MW:	97 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Using nuclear import assays, several cytosolic proteins that form a multi-protein complex have been identified. These proteins of 54 kDa, 56 kDa, and 97 kDa stimulate the nuclear transport of proteins containing a nuclear localization signal (NLS). The 97 kDa protein has been named karyopherin β. The NLS binds to karyopherin α. Binding is enhanced by karyopherin β. The NLS substrate also binds to the N-terminal region of karyopherin β. Both karyopherins bind to repeat sequences of nucleoporins at the nuclear envelope. Once the substrate is docked to the nuclear envelope, Ran hydrolyzes GTP and translocation occurs. Karyopherin β also binds to and inhibits the Ran GTPase protein, thus providing a mechanism of nuclear transport termination.



Western blot analysis of Karyopherin β on a Jurkat cell lysate (Human T-cell leukemia; ATCC TIB-152). *Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of the mouse anti-karyopherin β antibody.*



Immunofluorescence staining of rat pituitary cells.

Preparation and Storage

Store undiluted at -20° C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

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Application Notes

Application

Western blot	Routinely Tested
Immunoprecipitation	Tested During Development
Immunofluorescence	Tested During Development
Immunohistochemistry	Tested During Development

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Suggested Companion Products

Catalog Number	Name	Size	Clone
611451	Jurkat Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

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Radu A, Blobel G, Moore MS. Identification of a protein complex that is required for nuclear protein import and mediates docking of import substrate to distinct nucleoporins. *Proc Natl Acad Sci U S A.* 1995; 92(5):1769-1773.(Biology)

Rexach M, Blobel G. Protein import into nuclei: association and dissociation reactions involving transport substrate, transport factors, and nucleoporins. *Cell.* 1995; 83(5):683-692.(Biology)

Saitoh H, Pizzi MD, Wang J. Perturbation of SUMOlation enzyme Ubc9 by distinct domain within nucleoporin RanBP2/Nup358. *J Biol Chem.* 2002; 277(7):4755-4763.(Biology: Immunofluorescence)

Wiese C, Wilde A, Moore MS, Adam SA, Merdes A, Zheng Y. Role of importin-beta in coupling Ran to downstream targets in microtubule assembly. *Science.* 2001; 291(5504):653.(Biology: Western blot)