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Product Information

Anti- Importin 4 (N-terminal)
produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200168**

Product Description

Anti-Importin 4 (N-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at the N-terminal of human Importin 4 (Gene ID: 79711) conjugated to KLH. The corresponding sequence is identical in mouse. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Importin 4 (N-terminal) recognizes human Importin 4. The antibody may be used in several immuno-chemical techniques including immunoblotting (~120 kDa), immunoprecipitation and immuno-fluorescence. Detection of the Importin 4 band by immunoblotting is specifically inhibited by the immunizing peptide.

Nucleocytoplasmic transport of proteins and RNAs occurs through nuclear pore complexes (NPCs) and is mediated by a soluble and conserved family known as importin β–type nuclear transport receptors also named importins/exportins or karyopherins. As their names imply, importins or exportins can mediate either the nuclear import or export (and sometimes even both) of a very diverse set of protein or RNA cargoes.
In human cells there are more than 20, and in yeast there are at least 14 members of the family, all interacting directly with their cargoes, although some also use adapter proteins.[1,2] The function of exportins and importins is regulated by the Ran G protein. When Ran is linked to GTP as RanGTP, it enhances binding between exportins and their cargo but stimulates the release of an importin cargo. RanGDP stimulates the release of a cargo from exportins, but enhances the binding between an importin and its cargo.[1-3] In addition to taking part in the nuclear import pathway, importins were implicated in anti-aggregation activity of highly basic cargo like histones and ribosomal proteins and in preventing their undesired interactions with other cellular components. [4]

Importin 4, a 119 kDa protein, has been identified as an import factor for ribosomal protein rpS3α, the vitamin D receptor and the sperm transition protein TP2. In all these cases the common feature is the basic nature of the import cargoes.[5]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at −20 °C. For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in “frost-free” freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 1-2 μg/mL is recommended using HepG2 cell lysates.

Immunoprecipitation: a working amount of 2.5-5.0 μg is recommended using HepG2 cell lysates.

Immunofluorescence: a working concentration of 1.25-2.5 μg/mL is recommended using HEK-293T cells overexpressing human Importin 4.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

1. Gorlich, D., and Kutay, U., *Annu. Rev. Cell Dev. Biol.*, **15**, 607-660 (1999).
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3. Weis, K., *Cell*, **112**, 441-451 (2003).
4. Jakel, S., et al., *EMBO J.*, **21**, 377- 386 (2002).
5. Deng, D., et al., *J. Virol.*, **80**, 11911-11919 (2006).

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