

Product Information

Anti-Importin 7 (C-terminal)

produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200152**

Product Description

Anti-Importin 7 (C-terminal) is developed in rabbit using as immunogen a synthetic peptide corresponding to amino acids 943-957 of human Importin 7 (Gene ID: 105727) conjugated to KLH. The corresponding sequence is identical in mouse and rat Importin 7. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Importin 7 (C-terminal) recognizes human Importin 7. The antibody may be used in several immunochemical techniques including immunoblotting (~120 kDa) and immunoprecipitation. Detection of the Importin 7 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 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 members of the family, and in yeast there are at least 14 members, all interacting directly with their cargoes, although some also use adapter proteins. The function of exportins and importins is regulated by the Ran G protein. Ran bound to GTP (RanGTP) enhances binding between exportin and its cargo but stimulates the release of cargo from importins. RanGDP stimulates the release of exportin's cargo, 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 7 (also known as IPO7, RANBP7 and IMP7) has been identified as an importin for ribosomal protein L23a (rpL23a), histone H1, HIV reverse transcriptase complex and the zinc finger protein, EZI.⁵

Reagent

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

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. Discard working dilutions if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 1-2 μ g/mL is recommended using whole extracts of human HeLa cells.

Immunoprecipitation: a antibody working amount of 5-10 μ g is recommended using lysates of human HEK-293 cells.

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. Saijou, E., et al., *J. Biol. Chem.*, **282**, 32327-32337 (2007).

CS,SG,KAA,PHC 10/10-1

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