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Product Information

Anti-Exportin 1/Crm1 (C-terminal)
produced in rabbit, affinity isolated antibody

Product Number **E7909**

Product Description

Anti-Exportin 1/Crm1 (C-terminal) is produced in rabbit using as the immunogen a synthetic peptide corresponding to a sequence at the C-terminal of human Exportin 1/Crm1 (Gene ID: 7514) conjugated to KLH. The corresponding sequence is identical in rat and mouse. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Exportin 1/Crm1 (C-terminal) recognizes human Exportin 1/Crm1. The antibody may be used in various immunochemical techniques including immunoblotting (~125 kDa). Detection of the Exportin 1/Crm1 band by immunoblotting is specifically inhibited with the immunizing peptide.

Nucleocytoplasmic transport occurs through nuclear pore complexes (NPCs) and is mediated by transport receptors that shuttle between the nucleus and the cytoplasm. Most transport receptors are members of a conserved family of proteins known as importin β–type nuclear transport receptors or karyopherins, which include nuclear export receptors (exportins), as well as nuclear import receptors (importins).[1,2]

Exportins and importins are regulated by the G protein Ran, and depend on its state as GTP or GDP bound. RanGTP enhances binding between an exportin and its cargo, but stimulates release of importin's cargo, while RanGDP stimulates the release of exportin's cargo, but enhances the binding between an importin and its cargo.[1,2]

Exportin 1/Crm1 (also known as XPO1, Exp1, Chromosome region maintenance 1 protein homolog) is a major broad substrate range nuclear export receptor that interacts with leucine-rich nuclear export signals (NES) on most of its export protein substrates. It functions also as a major RNA export factor involved in the transport of rRNA, U snRNA, and certain subsets of mRNA.[3]

In contrast to other exportins, Exportin 1/Crm1 does not recognize RNAs directly but via specific NES-containing adaptor proteins such as Rev, PHAX, NMD3, and TFIIIA, which transport these RNAs into the CRM1-mediated export pathway.[3] Exportin 1/Crm1 has been implicated in various steps during mitosis.[4]

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

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at –20 °C. For continuous use, the product may be stored at 2–8 °C for up to one month. For extended storage, freeze at –20 °C 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 2-4 μg/mL is recommended using K562 cell lysates.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

1. Gorlich, D., and Kutay, U., *Annu. Rev. Cell Dev. Biol.,* **15**, 607-660 (1999).
2. Cook, A. et al., *Annu. Rev. Biochem.,* **76**, 647-671 (2007).
3. Roderiguez, M.S. et al., *Biol. Cell*, **96**, 639-655 (2004).
4. Hutten, S., and Kehlenbach, R.H., *Trends Cell Biol*., **17**, 193-201 (2007).

VS,SG,TD,KAA,PHC,MAM 05/19-1