abcam

ab251055

Anti-CRM1 antibody [EPR14124] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR14124
Purification technique	Affinity purification Protein A
Concentration	1.05 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-

Notes	-

Expected

Species	Rat, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Rat, Human, Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Rat, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Rat, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information XPO1

Function Mediates the nuclear export of cellular proteins (cargos) bearing a leucine-rich nuclear export signal (NES) and of RNAs. In the nucleus, in association with RANBP3, binds cooperatively to the NES on its target protein and to the GTPase RAN in its active GTP-bound form (Ran-GTP). Docking of this complex to the nuclear pore complex (NPC) is mediated through binding to nucleoporins. Upon transit of a nuclear export complex into the cytoplasm, disassembling of the complex and hydrolysis of Ran-GTP to Ran-GDP (induced by RANBP1 and RANGAP1, respectively) cause release of the cargo from the export receptor. The directionality of nuclear export is thought to be conferred by an asymmetric distribution of the GTP- and GDP-bound forms of Ran between the cytoplasm and nucleus. Involved in U3 snoRNA transport from Cajal bodies to nucleoli. Binds to late precursor U3 snoRNA bearing a TMG cap. (Microbial infection) Mediates the export of unspliced or incompletely spliced RNAs out of the nucleus from different viruses including HIV-1, HTLV-1 and influenza A. Interacts with, and mediates the nuclear export of HIV-1 Rev and HTLV-1 Rex proteins. Involved in HTLV-1 Rex multimerization.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab251055 is the carrier-free version of ab191081.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For

details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	CRM1 also known as exportin 1 is a significant nuclear export protein with a molecular mass of approximately 123 kDa. It is expressed in a wide range of eukaryotic cells being an important component in transporting molecules from the nucleus to the cytoplasm. The CRM1 protein binds cargo proteins bearing a leucine-rich nuclear export signal (NES) and facilitates their passage through the nuclear pore complex. Due to its essential role in nuclear-cytoplasmic transport CRM1 serves as a targeted protein in various research and therapeutic contexts.
Biological function summary	CRM1 participates in the regulation of gene expression by controlling the export of mRNA and ribosomal subunits. It does not act alone but associates with other proteins such as Ran GTPase to form a functioning export complex. This CRM1 complex plays a pivotal role in maintaining cellular homeostasis and responding to cellular stress by regulating the localization of key signaling molecules and transcription factors.
Pathways	CRM1 integrates into critical pathways such as the Wnt signaling pathway and DNA damage response. In the Wnt signaling pathway CRM1 influences the localization and activity of beta-catenin a central protein in the pathway. In the DNA damage response CRM1 interacts with p53 a notable tumor suppressor protein. Through these pathways CRM1 ensures proper control of cell proliferation apoptosis and differentiation.
Associated diseases and disorders	CRM1 is implicated in cancer and viral infections. Dysregulation of CRM1-mediated nuclear export can lead to abnormal accumulation of oncogenic proteins in the

cytoplasm which contributes to cancer pathogenesis. CRM1 overexpression is often observed in several cancers including leukemia and pancreatic cancer linking it to essential regulatory proteins like p53 and NF-kB. Additionally certain viruses exploit CRM1's export mechanism to enhance their replication making it a target for antiviral research.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

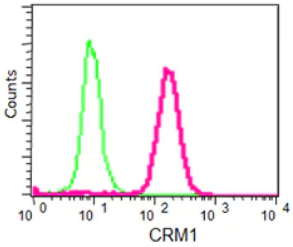
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

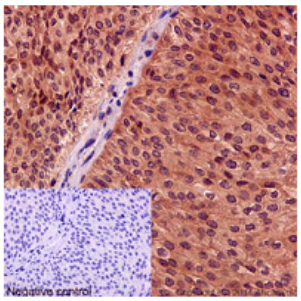
4 product images



Flow Cytometry (Intracellular) - Anti-CRM1 antibody [EPR14124] - BSA and Azide free (ab251055)

CRM1 Flow Cytometry (Intracellular) staining using rabbit Anti-CRM1 antibody

This data was developed using ab191081, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of K562 cells (paraformaldehyde-fixed, 2%) labeling CRM1 with ab191081 at 1/160 dilution (red) or a rabbit IgG (negative) (green), followed by Goat anti rabbit IgG (FITC) secondary at 1/150 dilution.

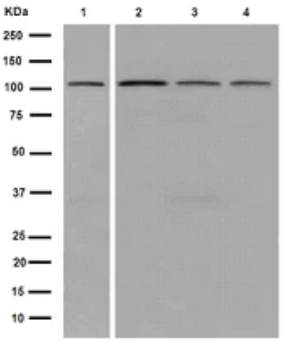


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CRM1 antibody [EPR14124] - BSA and Azide free (ab251055)

CRM1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CRM1 antibody

This data was developed using ab191081, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded human bladder transitional cell carcinoma tissue labeling CRM1 with ab191081 at 1/50 dilution followed by pre-diluted HRP Polymer for Rabbit IgG secondary antibody and counter-stained with Hematoxylin (inset: negative control).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-CRM1 antibody [EPR14124] - BSA and Azide free (ab251055)

CRM1 Western blot staining using rabbit Anti-CRM1 antibody

This data was developed using ab191081, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-CRM1 antibody [EPR14124] - BSA and Azide free (ab251055) at 1/20000 dilution

Lane 1:
K562 cell lysate at 20 µg

Lane 2:
HeLa cell lysate at 20 µg

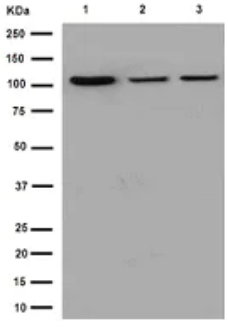
Lane 3:
Jurkat cell lysate at 20 µg

Lane 4:
Ramos cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugate at 1/1000 dilution

Predicted band size: 123 kDa



Western blot - Anti-CRM1 antibody [EPR14124] - BSA and Azide free (ab251055)

This data was developed using ab191081, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-CRM1 antibody [EPR14124] - BSA and Azide free (ab251055) at 1/5000 dilution

Lane 1:
C6 cell lysate at 10 µg

Lane 2:
PC-12 cell lysate at 10 µg

Lane 3:
NIH/3T3 cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit IgG, (H+L), peroxidase conjugated at 1/1000 dilution

Predicted band size: 123 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.