abcam

Product datasheet

# Anti-CRM1 antibody ab3459

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## Overview

| | |
|---|---|
| **Product name** | Anti-CRM1 antibody |
| **Description** | Rabbit polyclonal to CRM1 |
| **Host species** | Rabbit |
| **Tested applications** | **Suitable for:** WB |
| **Species reactivity** | **Reacts with:** Mouse, Human |
| **Immunogen** | Synthetic peptide corresponding to Human CRM1 aa 1043-1058.<br>Sequence:<br>RQADEEKHKRQMSVPGS<br><br>(Peptide available as **ab41768**)<br>Run BLAST with Run BLAST with |
| **General notes** | The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.<br>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As |

## Properties

| | |
|---|---|
| **Form** | Liquid |
| **Storage instructions** | Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles. |
| **Storage buffer** | Preservative: 0.05% Sodium azide<br>Constituents: 0.1% BSA, 99% PBS |
| **Purity** | Immunogen affinity purified |
| **Primary antibody notes** | Diffusion of metabolites and small non-nuclear molecules as well as active, mediated import of protein and export of protein and RNA through the nuclear envelope occurs through nuclear pore complexes or NPC's. NPC's contain up to 100 different polypeptides which have a combined mass of about 125 megadaltons. The channel available for passive transport through the NPC is |

about 9-10 nm in diameter while carrier mediated changes in the NPC result in a ~25 nm channel used for larger, actively transported molecules. Active transport of molecules through the NPC is a signal-mediated process that is not well understood. Proteins to be exported from the nucleus to cytoplasm contain leucine-rich nuclear export signals (NESs). NESs are recognized by transport receptors belonging to the importin-beta family of proteins. It has been shown that NES export is mediated by CRM 1 (Chromosome Region Maintenance 1), an importin-beta family member that binds NESs, Ran:GTP, and Ran binding protein (RanBP). CRM 1 mediates the nuclear exportation of numerous proteins, including histone deacetylases (HDACs), viral proteins, immunophilins, and STAT 1.

**Clonality** Polyclonal

**Isotype** IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab3459 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| **WB** | | 1/500 - 1/5000. Detects a band of approximately 135 kDa (predicted molecular weight: 119 kDa). |

## Target

**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 an 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. Several viruses, among them HIV-1, HTLV-1 and influenza A use it to export their unspliced or incompletely spliced RNAs out of the nucleus. Interacts with, and mediates the nuclear export of HIV-1 Rev and HTLV-1 Rex proteins. Involved in HTLV-1 Rex multimerization.

**Tissue specificity** Expressed in heart, brain, placenta, lung, liver, skeletal muscle, pancreas, spleen, thymus, prostate, testis, ovary, small intestine, colon and peripheral blood leukocytes. Not expressed in the kidney.

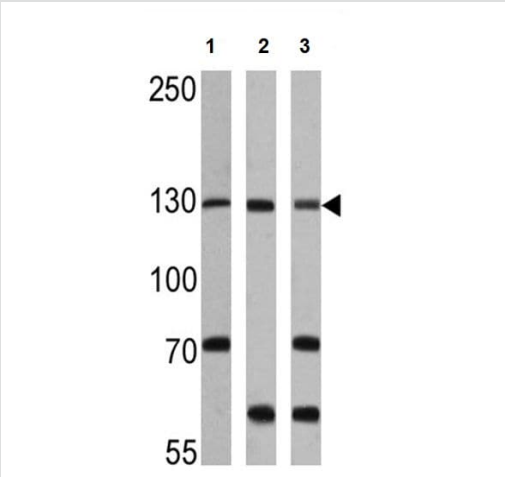
**Sequence similarities** Belongs to the exportin family.
Contains 10 HEAT repeats.
Contains 1 importin N-terminal domain.

**Post-translational modifications** Phosphorylated upon DNA damage, probably by ATM or ATR.

**Cellular localization** Cytoplasm. Nucleus > nucleoplasm. Nucleus > Cajal body. Nucleus > nucleolus. Located in the nucleoplasm, Cajal bodies and nucleoli. Shuttles between the nucleus/nucleolus and the

cytoplasm.

## Images




Western blot - Anti-CRM1 antibody (ab3459)

**All lanes :** Anti-CRM1 antibody (ab3459) at 1/1000 dilution

**Lane 1 :** SK-BR-3 (Human mammary gland adenocarcinoma cell line) whole cell lysate
**Lane 2 :** HeLa (Human epithelial adenocarcinoma cell line) whole cell lysate
**Lane 3 :** NIH/3T3 (Mouse embryo fibroblast cell line) whole cell lysate

Lysates/proteins at 25 µg per lane.

**Secondary**
**All lanes :** HRP-conjugated anti-rabbit

**Predicted band size:** 119 kDa
**Observed band size:** 130 kDa



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