

# CRM1 (G-9): sc-373865

## BACKGROUND

Protein transport across the nucleus is a selective, multistep process involving several cytoplasmic factors. Proteins must be recognized as import substrates, dock at the nuclear pore complex and translocate across the nuclear envelope in an ATP-dependent fashion. Two cytosolic factors centrally involved in the recognition and docking process are the karyopherin  $\alpha$ 1 and karyopherin  $\beta$ 1 subunits. p62 glycoprotein is a nucleoporin that is not only involved in the nuclear import of proteins, but also the export of nascent mRNA strands. NTF2 (nuclear transport factor 2) interacts with nucleoporin p62 as a homodimer composed of two monomers, and may be an obligate component of functional p62. CRM1 has been shown to be an export receptor for leucine-rich proteins that contain the nuclear export signal (NES).

## REFERENCES

1. Buss, F., et al. 1995. Macromolecular interactions in the nucleoporin p62 complex of rat nuclear pores: binding of nucleoporin p54 to the rod domain of p62. *J. Cell Biol.* 128: 251-261.
2. Paschal, B.M., et al. 1995. Identification of NTF2, a cytosolic factor for nuclear import that interacts with nuclear pore complex protein p62. *J. Cell Biol.* 129: 925-937.
3. Dargemont, C., et al. 1995. Direct interaction of nucleoporin p62 with mRNA during its export from the nucleus. *J. Cell Sci.* 108: 257-263.
4. Lounsbury, K.M., et al. 1996. Ran binding domains promote the interaction of Ran with p97/ $\beta$ -karyopherin, linking the docking and translocation steps of nuclear import. *J. Biol. Chem.* 271: 2357-2360.
5. Moroianu, J., et al. 1996. The binding site of karyopherin  $\alpha$  for karyopherin  $\beta$  overlaps with a nuclear localization sequence. *Proc. Natl. Acad. Sci. USA* 93: 6572-6576.

## CHROMOSOMAL LOCATION

Genetic locus: XPO1 (human) mapping to 2p15; Xpo1 (mouse) mapping to 11 A3.2.

## SOURCE

CRM1 (G-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 6-31 at the N-terminus of CRM1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $\gamma$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-373865 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

CRM1 (G-9) is recommended for detection of CRM1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CRM1 (G-9) is also recommended for detection of CRM1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CRM1 siRNA (h): sc-35116, CRM1 siRNA (m): sc-35117, CRM1 shRNA Plasmid (h): sc-35116-SH, CRM1 shRNA Plasmid (m): sc-35117-SH, CRM1 shRNA (h) Lentiviral Particles: sc-35116-V and CRM1 shRNA (m) Lentiviral Particles: sc-35117-V.

Molecular Weight of CRM1: 115 kDa.

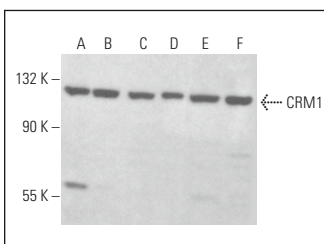
Positive Controls: K-562 nuclear extract: sc-2130, IMR-32 cell lysate: sc-2409 or Jurkat whole cell lysate: sc-2204.

## RECOMMENDED SUPPORT REAGENTS

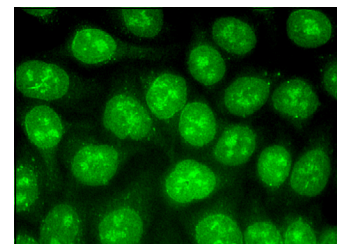
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.
- 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



CRM1 (G-9): sc-373865. Western blot analysis of CRM1 expression in K-562 nuclear extract (A) and A-431 (B), Jurkat (C), IMR-32 (D), HEK293T (E) and Ramos (F) whole cell lysates.



CRM1 (G-9): sc-373865. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear and cajal bodies localization. Detection reagent used: m-IgG $\kappa$  BP-CFL 488: sc-516176.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.



See **CRM1 (C-1): sc-74454** for CRM1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.