SANTA CRUZ BIOTECHNOLOGY, INC.

CRM1 (H-300): sc-5595

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 α1 and karyopherin β1 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).

CHROMOSOMAL LOCATION

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

SOURCE

CRM1 (H-300) is a rabbit polyclonal antibody raised against amino acids 772-1071 of CRM1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CRM1 (H-300) is recommended for detection of CRM1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 (H-300) is also recommended for detection of CRM1 in additional species, including equine, canine, bovine, porcine and avian.

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: Jurkat nuclear extract: sc-2132, A-431 nuclear extract: sc-2122 or HeLa nuclear extract: sc-2120.

STORAGE

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

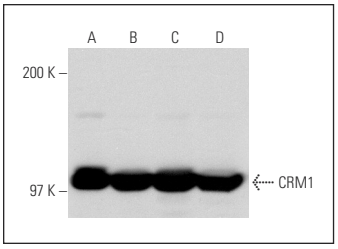
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

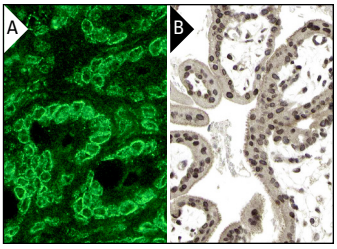
RESEARCH USE

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

DATA



CRM1 (H-300): sc-5595. Western blot analysis of CRM1 expression in HeLa (**A**), A-431 (**B**), K-562 (**C**) and Jurkat (**D**) nuclear extracts.



CRM1 (H-300): sc-5595. Immunofluorescence staining of normal mouse intestine frozen section showing nuclear staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear and cytoplasmic staining in decidual and trophoblastic cells magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Klein, J., et al. 2002. The harlequin mouse mutation down-regulates apoptosis-inducing factor. Nature 419: 367-374.
2. Li, F.Q., et al. 2010. Nuclear-cytoplasmic shuttling of Chibby controls β-catenin signaling. Mol. Biol. Cell 21: 311-322.
3. Li, C., et al. 2010. A bifunctional regulatory element in human somatic Wee1 mediates cyclin A/Cdk2 binding and Crm1-dependent nuclear export. Mol. Cell. Biol. 30: 116-130.
4. Sato, H., et al. 2010. Relevance of gonadotropin-regulated testicular RNA helicase (GRTH/DDX25) in the structural integrity of the chromatoid body during spermatogenesis. Biochim. Biophys. Acta 1803: 534-543.
5. Chang, J.S., et al. 2010. Regulation of NT-PGC-1α subcellular localization and function by protein kinase A-dependent modulation of nuclear export by CRM1. J. Biol. Chem. 285: 18039-18050.
6. Evangelisti, C., et al. 2010. Identification of a functional nuclear export sequence in diacylglycerol kinase-ζ. Cell Cycle 9: 384-388.
7. van der Watt, P.J., et al. 2011. The nuclear exporter, Crm1, is regulated by NFY and Sp1 in cancer cells and repressed by p53 in response to DNA damage. Biochim. Biophys. Acta 1809: 316-326.
8. Roscioli, E., et al. 2012. Importin-β negatively regulates multiple aspects of mitosis including RANGAP1 recruitment to kinetochores. J. Cell Biol. 196: 435-450.