SANTA CRUZ BIOTECHNOLOGY, INC.

CRM1 (C-20): sc-7825

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 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus 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.

Blocking peptide available for competition studies, sc-7825 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CRM1 (C-20) 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), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CRM1 (C-20) 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: HeLa nuclear extract: sc-2120, A-431 nuclear extract: sc-2122 or K-562 nuclear extract: sc-2130.

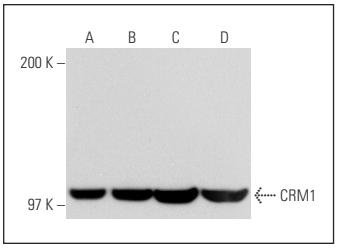
STORAGE

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

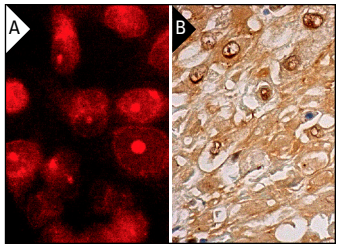
RESEARCH USE

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

DATA



CRM1 (C-20): sc-7825. Western blot analysis of CRM1 expression in HeLa (**A**), A-431 (**B**), K-562 (**C**) and Jurkat (**D**) nuclear extracts.



CRM1 (C-20): sc-7825. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and nucleolar localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear and cytoplasmic staining of decidual cells (**B**).

SELECT PRODUCT CITATIONS

1. Buck, M., et al. 2001. Nuclear export of phosphorylated C/EBP β mediates the inhibition of albumin expression by TNFα. EMBO J. 20: 6712-6723.
2. Gatza, M.L., et al. 2006. Genotoxic stress and cellular stress alter the subcellular distribution of human T-cell leukemia virus type 1 tax through a CRM1-dependent mechanism. J. Virol. 80: 6657-6668.
3. Stauber, R.H., et al. 2006. Nucleocytoplasmic shuttling and the biological activity of mouse survivin are regulated by an active nuclear export signal. Traffic 7: 1461-1472.
4. Knauer, S.K., et al. 2006. The Survivin-CRM1 interaction is essential for chromosomal passenger complex localization and function. EMBO Rep. 7: 1259-1265.
5. Pickard, B.W., et al. 2007. Type 1 parathyroid hormone receptor (PTH1R) nuclear trafficking: regulation of PTH1R nuclear-cytoplasmic shuttling by importin-α/β and chromosomal region maintenance 1/exportin 1. Endocrinology 148: 2282-2289.
6. Castanotto, D., et al. 2009. CRM1 mediates nuclear-cytoplasmic shuttling of mature microRNAs. Proc. Natl. Acad. Sci. USA 106: 21655-21659.
7. Luo, M., et al. 2010. Nuclear entry of active caspase-3 is facilitated by its p3-recognition-based specific cleavage activity. Cell Res. 20: 211-222.
8. Buanne, P., et al. 2013. Characterization of carbonic anhydrase IX interactome reveals proteins assisting its nuclear localization in hypoxic cells. J. Proteome Res. 12: 282-292.