Revision 8

Store at -20C

#46249

Exportin-1/CRM1 (D6V7N) Rabbit mAb

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IHC-P, IF-IC	H M Mk	Endogenous	123	Rabbit IgG	#O14980	7514

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunohistochemistry (Paraffin)	1:300 - 1:1200
Immunofluorescence (Immunocytochemistry)	1:400 - 1:1600

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #49000.

Specificity/Sensitivity

Exportin-1/CRM1 (D6V7N) Rabbit mAb recognizes endogenous levels of total exportin-1/CRM1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the carboxy terminus of human exportin-1/CRM1 protein.

Background

Exportins are a family of seven proteins that are responsible for intracellular transport. Exportin-1, also known as chromosome region maintenance 1 (CRM1), is a protein essential for nuclear export of hundreds of proteins, mRNAs, and rRNAs (1-3). Exportin-1 binds to substrates with nuclear export signals (NESs) rich in leucine and other hydrophobic amino acids (4). These hydrophobic sequences form an alpha-helix-loop that can bind to the exportin-1 hydrophobic groove (5). Studies have shown that these NESs can be modified either by protein modifications or by mutation to regulate exportin-1 binding (6-7). Targets of exportin-1 include many tumor suppressors, such as Rb, p53, FoxO1, BAF47, as well as oncoproteins, such as p21 and p27 (1). In addition, Myc can upregulate exportin-1 during biogenesis, where it can export newly formed 40S and 60S subunits from the nucleoli (8-9).

Inhibition of nuclear export has been pursued for therapeutic application since the finding that leptomycin B could suppress HIV replication by suppressing the ability of exportin-1 to export the HIV-1 protein Rev (2, 10). Overexpression of exportin-1 has been associated with poor prognosis in various cancer types (11-13). Genomic approaches and development of inhibitors have identified exportin-1 as a druggable target (14-16). The use of various inhibitors of exportin-1 is also being explored in various antiviral therapies (17-18).

Background References

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Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human **M:** Mouse **Mk:** Monkey

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Limited Uses