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RCC1 Antibody

Mouse Monoclonal Antibody (Mab)
Catalog # AM1961a

Product Information

Application	WB, E
Primary Accession	P18754
Other Accession	NP_001041660.1, NP_001041659.1, NP_001041664.1
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Clone Names	332CT2.1.1
Calculated MW	44969

Additional Information

Gene ID	1104
Other Names	Regulator of chromosome condensation, Cell cycle regulatory protein, Chromosome condensation protein 1, RCC1, CHC1
Target/Specificity	This RCC1 monoclonal antibody is generated from mouse immunized with RCC1 recombinant protein.
Dilution	WB~~1:1000~16000 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	RCC1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RCC1
Synonyms	CHC1
Function	Guanine-nucleotide releasing factor that promotes the exchange of Ran-bound GDP by GTP, and thereby plays an important role in RAN-mediated functions in nuclear import and mitosis (PubMed:11336674,

PubMed:17435751, PubMed:1944575, PubMed:20668449, PubMed:22215983, PubMed:29042532). Contributes to the generation of high levels of chromosome-associated, GTP-bound RAN, which is important for mitotic spindle assembly and normal progress through mitosis (PubMed:12194828, PubMed:17435751, PubMed:22215983). Via its role in maintaining high levels of GTP-bound RAN in the nucleus, contributes to the release of cargo proteins from importins after nuclear import (PubMed:22215983). Involved in the regulation of onset of chromosome condensation in the S phase (PubMed:3678831). Binds both to the nucleosomes and double-stranded DNA (PubMed:17435751, PubMed:18762580).

Cellular Location

Nucleus. Chromosome. Cytoplasm Note=Predominantly nuclear in interphase cells (PubMed:12194828). Binds to mitotic chromosomes (PubMed:12194828, PubMed:17435751, PubMed:20668449).

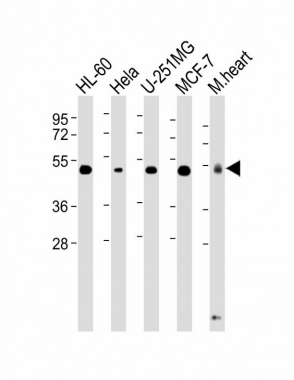
Background

Guanine-nucleotide releasing factor that promotes the exchange of Ran-bound GDP by GTP. Involved in the regulation of onset of chromosome condensation in the S phase. Binds both to the nucleosomes and double-stranded DNA. RCC1-Ran complex (together with other proteins) acts as a component of a signal transmission pathway that detects unreplicated DNA. Plays a key role in nucleo-cytoplasmic transport, mitosis and nuclear-envelope assembly.

References

Tooley, C.E., et al. Nature 466(7310):1125-1128(2010)
England, J.R., et al. J. Mol. Biol. 398(4):518-529(2010)
Wong, C.H., et al. Nat. Cell Biol. 11(1):36-45(2009)
Ho, C.Y., et al. J. Cell. Biochem. 105(3):835-846(2008)
Hao, Y., et al. J. Cell Biol. 182(5):827-836(2008)

Images



All lanes : Anti-RCC1 Antibody at 1:2000 dilution Lane 1: HL-60 whole cell lysate Lane 2: Hela whole cell lysate Lane 3: U-251MG whole cell lysate Lane 4: MCF-7 whole cell lysate Lane 5: Mouse heart lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 45 kDa Blocking/Dilution buffer: 5% NFDM/TBST.