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RANGAP1 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13776a

Product Information

Application	WB, IHC-P, E
Primary Accession	P46060
Other Accession	NP_002874.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB33892
Calculated MW	63542
Antigen Region	20-49

Additional Information

Gene ID	5905
Other Names	Ran GTPase-activating protein 1, RanGAP1, RANGAP1, KIAA1835, SD
Target/Specificity	This RANGAP1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 20-49 amino acids from the N-terminal region of human RANGAP1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	RANGAP1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RANGAP1
Synonyms	KIAA1835, SD
Function	GTPase activator for RAN (PubMed: 16428860, PubMed:8146159, PubMed:8896452). Converts cytoplasmic GTP-bound RAN to GDP-bound RAN,

	which is essential for RAN-mediated nuclear import and export (PubMed:27160050, PubMed:8896452). Mediates dissociation of cargo from nuclear export complexes containing XPO1, RAN and RANBP2 after nuclear export (PubMed:27160050).
Cellular Location	Cytoplasm. Nucleus, nucleoplasm. Nucleus envelope. Chromosome, centromere, kinetochore. Cytoplasm, cytoskeleton, spindle. Note=Cytoplasmic during interphase Detected at the nuclear envelope during interphase (PubMed:11854305, PubMed:15037602). Targeted to the nuclear pores after sumoylation (PubMed:11854305). During mitosis, associates with mitotic spindles, but is essentially not detected at the spindle poles (PubMed:11854305, PubMed:15037602). Association with kinetochores appears soon after nuclear envelope breakdown and persists until late anaphase (PubMed:11854305). Mitotic location also requires sumoylation (PubMed:11854305).
Tissue Location	Highly expressed in brain, thymus and testis.

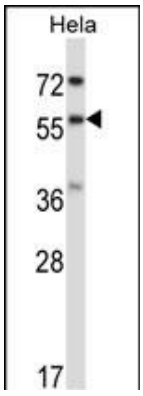
Background

RanGAP1, is a homodimeric 65-kD polypeptide that specifically induces the GTPase activity of RAN, but not of RAS by over 1,000-fold. RanGAP1 is the immediate antagonist of RCC1, a regulator molecule that keeps RAN in the active, GTP-bound state. The RANGAP1 gene encodes a 587-amino acid polypeptide. The sequence is unrelated to that of GTPase activators for other RAS-related proteins, but is 88% identical to Fug1, the murine homolog of yeast Rna1p. RanGAP1 and RCC1 control RAN-dependent transport between the nucleus and cytoplasm. RanGAP1 is a key regulator of the RAN GTP/GDP cycle.

References

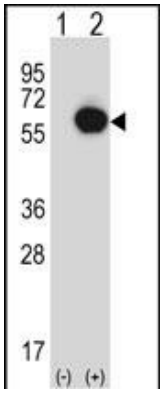
Zhang, J., et al. Biochem. Biophys. Res. Commun. 375(2):252-255(2008)
Zuccolo, M., et al. EMBO J. 26(7):1853-1864(2007)
Ewing, R.M., et al. Mol. Syst. Biol. 3, 89 (2007) :
Vertegaal, A.C., et al. Mol. Cell Proteomics 5(12):2298-2310(2006)
Vertegaal, A.C., et al. Mol. Cell Proteomics 5(12):2298-2310(2006)

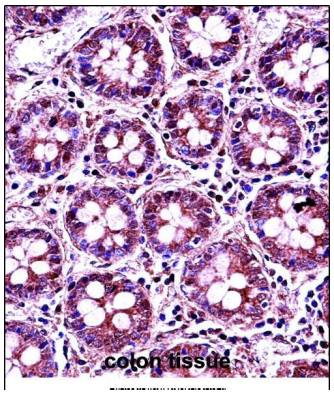
Images



RANGAP1 Antibody (N-term) (Cat. #AP13776a) western blot analysis in Hela cell line lysates (35ug/lane).This demonstrates the RANGAP1 antibody detected the RANGAP1 protein (arrow).

Western blot analysis of RANGAP1 (arrow) using rabbit polyclonal RANGAP1 Antibody (N-term) (Cat. #AP13776a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the RANGAP1 gene.





RANGAP1 Antibody (N-term) (Cat. #AP13776a)immunohistochemistry analysis in formalin fixed and paraffin embedded human colon tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of RANGAP1 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

Citations

- Aging-related SUMOylation pattern in the cortex and blood plasma of wild type mice.