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RNH1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12438b

Product Information

Application	IF, WB, E
Primary Accession	P13489
Other Accession	NP_976318.1, NP_976317.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB31109
Calculated MW	49973
Antigen Region	425-454

Additional Information

Gene ID	6050
Other Names	Ribonuclease inhibitor, Placental ribonuclease inhibitor, Placental RNase inhibitor, Ribonuclease/angiogenin inhibitor 1, RAI, RNH1, PRI, RNH
Target/Specificity	This RNH1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 425-454 amino acids from the C-terminal region of human RNH1.
Dilution	IF~~1:10~50 WB~~1:1000 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	RNH1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RNH1 {ECO:0000303|PubMed:36935417, ECO:0000312|HGNC:HGNC:10074}
Function	Ribonuclease inhibitor which inhibits RNASE1, RNASE2 and angiogenin (ANG) (PubMed:12578357, PubMed:14515218, PubMed:3219362, PubMed:3243277, PubMed:3470787, PubMed:9050852). May play a role in

	redox homeostasis (PubMed:17292889). Required to inhibit the cytotoxic tRNA ribonuclease activity of ANG in the cytoplasm in absence of stress (PubMed:23843625, PubMed:32510170). Relocates to the nucleus in response to stress, relieving inhibition of ANG in the cytoplasm, and inhibiting the angiogenic activity of ANG in the nucleus (PubMed:23843625).
Cellular Location	Cytoplasm. Nucleus Note=Localizes in the cytoplasm in absence of stress; translocates to the nucleus in response to stress.

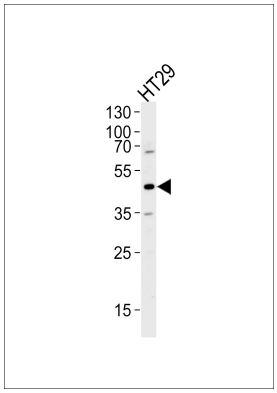
Background

Placental ribonuclease inhibitor (PRI) is a member of a family of proteinaceous cytoplasmic RNase inhibitors that occur in many tissues and bind to both intracellular and extracellular RNases (summarized by Lee et al., 1988 [PubMed 3219362]). In addition to control of intracellular RNases, the inhibitor may have a role in the regulation of angiogenin (MIM 105850). Ribonuclease inhibitor, of 50,000 Da, binds to ribonucleases and holds them in a latent form. Since neutral and alkaline ribonucleases probably play a critical role in the turnover of RNA in eukaryotic cells, RNH may be essential for control of mRNA turnover; the interaction of eukaryotic cells with ribonuclease may be reversible in vivo.

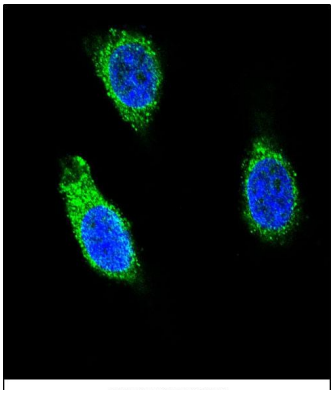
References

Martins-de-Souza, D., et al. J Psychiatr Res 44(14):989-991(2010)
Martins-de-Souza, D., et al. J Neural Transm 116(3):275-289(2009)
Turcotte, R.F., et al. Biochem. Biophys. Res. Commun. 377(2):512-514(2008)
Johnson, R.J., et al. Biochemistry 46(45):13131-13140(2007)
Johnson, R.J., et al. J. Mol. Biol. 368(2):434-449(2007)

Images



Western blot analysis of lysate from HT29 cell line,using RNH1 Antibody (C-term)(Cat. #AP12438b).AP12438b was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody.Lysate at 35ug per lane.



Confocal immunofluorescent analysis of RNH1 Antibody (C-term) (Cat#AP12438b) with 293 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).