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RT4I1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP10774b

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q8WWV3
Other Accession	NP_116119.2
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB28658
Calculated MW	43590
Antigen Region	335-363

Additional Information

Gene ID	84816
Other Names	Reticulon-4-interacting protein 1, mitochondrial, NOGO-interacting mitochondrial protein, RTN4IP1, NIMP
Target/Specificity	This RT4I1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 335-363 amino acids from the C-terminal region of human RT4I1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 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	RT4I1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RTN4IP1 {ECO:0000303|PubMed:37884807, ECO:0000312|HGNC:HGNC:18647}
Function	NAD(P)H oxidoreductase involved in the ubiquinone biosynthetic pathway

	(PubMed:37884807). Required for the O- methyltransferase activity of COQ3 (PubMed:37884807). Able to catalyze the oxidoreduction of 3-demethylubiquinone into 3-demethylubiquinol in vitro (PubMed:37884807). However, it is unclear if 3-demethylubiquinone constitutes a substrate in vivo (PubMed:37884807). May also play a role in the regulation of retinal ganglion cell (RGC) neurite outgrowth, and hence in the development of the inner retina and optic nerve (By similarity). Appears to be a potent inhibitor of regeneration following spinal cord injury (By similarity).
Cellular Location	Mitochondrion matrix. Mitochondrion outer membrane. Note=Mainly localizes to the mitochondrial matrix (PubMed:37884807). Also colocalizes with the endoplasmic reticulum HSPA5 at spots corresponding to contacts with mitochondria (PubMed:26593267)
Tissue Location	Widely expressed in mitochondria-enriched tissues (PubMed:12067236). Found in heart, muscle, kidney, liver, brain and placenta (PubMed:12067236).

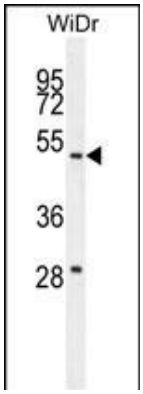
Background

This gene encodes a novel mitochondrial protein that interacts with reticulon 4, which is a potent inhibitor of regeneration following spinal cord injury. The interaction of reticulon 4 with mitochondrial proteins may provide insight into the mechanisms for reticulon-induced inhibition of neurite growth.

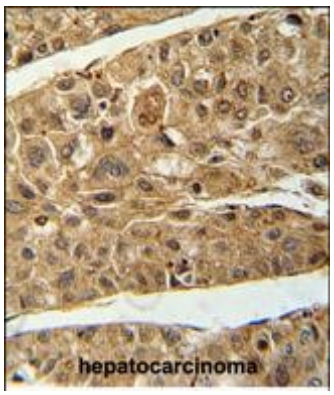
References

Rose, J. Phd, et al. Mol. Med. (2010) In press :
Mungall, A.J., et al. Nature 425(6960):805-811(2003)
Domeniconi, M., et al. Neuron 35(2):283-290(2002)
Hu, W.H., et al. J. Neurochem. 81(1):36-45(2002)

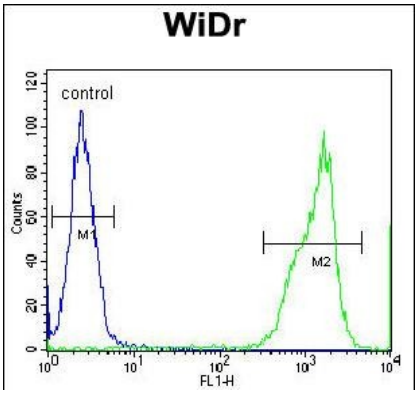
Images



RT4I1 Antibody (C-term) (Cat. #AP10774b) western blot analysis in WiDr cell line lysates (35ug/lane).This demonstrates the RT4I1 antibody detected the RT4I1 protein (arrow).



RT4I1 Antibody (C-term) (Cat. #AP10774b) immunohistochemistry analysis in formalin fixed and paraffin embedded human hepatocarcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the RT4I1 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.



RT4I1 Antibody (C-term) (Cat. #AP10774b) flow cytometric analysis of WiDr cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.