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ATL1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP16799b

Product Information

Application	WB, E
Primary Accession	Q8WXF7
Other Accession	Q6PST4, Q8BH66, Q60HD2, Q58D72, NP_001121185.1, NP_056999.2
Reactivity	Human
Predicted	Bovine, Monkey, Mouse, Rat, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB36288
Calculated MW	63544
Antigen Region	477-504

Additional Information

Gene ID	51062
Other Names	Atlastin-1, 365-, Brain-specific GTP-binding protein, GTP-binding protein 3, GBP-3, hGBP3, Guanine nucleotide-binding protein 3, Spastic paraplegia 3 protein A, ATL1, GBP3, SPG3A
Target/Specificity	This ATL1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 477-504 amino acids from the C-terminal region of human ATL1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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	ATL1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ATL1 (HGNC:11231)
Function	Atlastin-1 (ATL1) is a membrane-anchored GTPase that mediates the

	GTP-dependent fusion of endoplasmic reticulum (ER) membranes, maintaining the continuous ER network. It facilitates the formation of three-way junctions where ER tubules intersect (PubMed:14506257, PubMed:18270207, PubMed:19665976, PubMed:27619977, PubMed:34817557, PubMed:38509071). Two atlastin-1 on neighboring ER tubules bind GTP and form loose homodimers through the GB1/RHD3-type G domains and 3HB regions. Upon GTP hydrolysis, the 3HB regions tighten, pulling the membranes together to drive their fusion. After fusion, the homodimer disassembles upon release of inorganic phosphate (Pi). Subsequently, GDP dissociates, resetting the monomers to a conformation ready for a new fusion cycle (PubMed:14506257, PubMed:21220294, PubMed:21368113, PubMed:23334294, PubMed:38509071). May also regulate more or less directly Golgi biogenesis (PubMed:17321752). Indirectly regulates axonal development (By similarity).
Cellular Location	Endoplasmic reticulum membrane; Multi-pass membrane protein. Golgi apparatus membrane; Multi-pass membrane protein. Cell projection, axon {ECO:0000250|UniProtKB:Q6PST4}. Note=Localizes to endoplasmic reticulum tubular network (PubMed:27619977).
Tissue Location	Expressed predominantly in the adult and fetal central nervous system. Measurable expression in all tissues examined, although expression in adult brain is at least 50-fold higher than in other tissues. Detected predominantly in pyramidal neurons in the cerebral cortex and the hippocampus of the brain. Expressed in upper and lower motor neurons (at protein level)

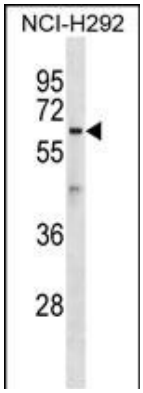
Background

The protein encoded by this gene is a GTPase and a Golgi body transmembrane protein. The encoded protein can form a homotetramer and has been shown to interact with spastin and with mitogen-activated protein kinase kinase kinase kinase 4. This protein may be involved in axonal maintenance as evidenced by the fact that defects in this gene are a cause of spastic paraplegia type 3. Three transcript variants encoding two different isoforms have been found for this gene.

References

Cirulli, E.T., et al. Eur. J. Hum. Genet. 18(7):815-820(2010)
Park, S.H., et al. J. Clin. Invest. 120(4):1097-1110(2010)
Yoshida, T., et al. Int. J. Mol. Med. 25(4):649-656(2010)
de Leva, M.F., et al. J. Neurol. 257(3):328-331(2010)
Oguri, M., et al. Am. J. Hypertens. 23(1):70-77(2010)

Images



ATL1 Antibody (C-term) (Cat. #AP16799b) western blot analysis in NCI-H292 cell line lysates (35ug/lane).This demonstrates the ATL1 antibody detected the ATL1 protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.