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ATL1

Purified Mouse Monoclonal Antibody
Catalog # AO2531a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	Q8WXF7
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1F6B12
Isotype	Mouse IgG1
Calculated MW	63544
Immunogen	Purified recombinant fragment of human ATL1 (AA: 1-100) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	51062
Other Names	FSP1; GBP3; SPG3; HSN1D; SPG3A; AD-FSP; atlastin1
Dilution	WB~~ 1/500 - 1/2000 IHC~~1:100~500 ICC~~N/A E~~ 1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ATL1 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)

References

1.Eur J Hum Genet. 2014 Oct;22(10):1180-4. 2.Mol Biol Cell. 2015 May 1;26(9):1616-28. doi: 10.1091/mbc.E14-10-1447.

Images

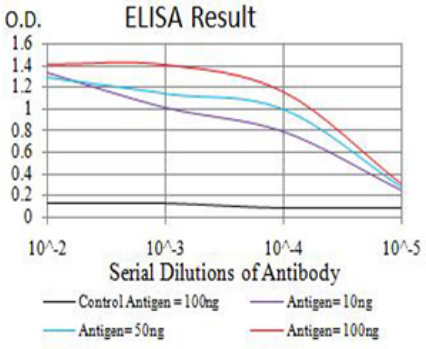


Figure 1:Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

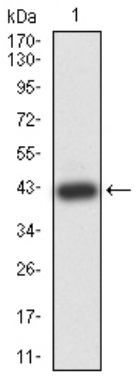
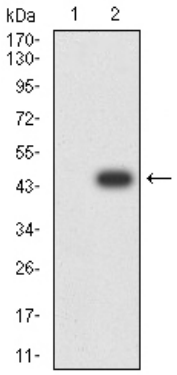


Figure 2:Western blot analysis using ATL1 mAb against human ATL1 (AA: 1-100) recombinant protein. (Expected MW is 41.3 kDa)

Figure 3:Western blot analysis using ATL1 mAb against HEK293 (1) and ATL1 (AA: 1-100)-hIgGFc transfected HEK293 (2) cell lysate.



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