

Atlastin-1 (D2E6) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	55	Rabbit IgG	#Q8WXF7	51062

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Atlastin-1 (D2E6) Rabbit mAb recognizes endogenous levels of total atlastin-1 protein. This antibody does not cross-react with atlastin-2 or atlastin-3. This antibody may cross-react with a protein of unknown origin at 100 kDa.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human atlastin-1 protein.

Background

Atlastin proteins are highly conserved members of the dynamin superfamily of membrane GTPases that are involved in the formation of vesicles for the endocytotic and secretory processes (1). Atlastins are required to establish and maintain the morphology of the tubular endoplasmic reticulum (ER) and are therefore important in ER function (2). GTP hydrolysis and dimerization are required for atlastin-dependent ER membrane fusion (3). Atlastin GTPase 1 (ATL1) is primarily expressed in brain, while the related atlastin 2 and atlastin 3 proteins are ubiquitously expressed (4). Mutations in the atlastin 1 gene SPG3A and the ER defects that result are thought to cause one form of hereditary spastic paraplegia (HSP), a group of heterogeneous neurological disorders characterized by severe progressive spasticity of the lower limbs (5,6).

Background References

1. McNiven, M.A. et al. (2000) *Trends Biochem Sci* 25, 115-20.
2. Park, S.H. and Blackstone, C. (2010) *EMBO Rep* 11, 515-21.
3. Moss, T.J. et al. (2011) *Proc Natl Acad Sci U S A* 108, 11133-8.
4. Rismanchi, N. et al. (2008) *Hum Mol Genet* 17, 1591-604.
5. Salinas, S. et al. (2008) *Lancet Neurol* 7, 1127-38.
6. Hu, J. et al. (2009) *Cell* 138, 549-61.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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