

# Atlastin (H-37): sc-67232

## BACKGROUND

Atlastins are Golgi-localized, integral membrane proteins that function as GTPases. The Atlastin proteins, also designated SPG3A and guanylate-binding protein 3, comprise a Dynamin superfamily that plays a role in axonal maintenance. Hereditary spastic paraplegia (HSP) is an inherited neurodegenerative disorder that is characterized by retrograde axonal degeneration. HSP primarily affects long corticospinal neurons and causes spastic lower extremity weakness. Spastin, a microtubule (MT)-severing AAA ATPase, is a binding partner of Atlastin that is involved in membrane dynamics. This Spastin/Atlastin binding may be involved in the biochemical pathway that leads to HSP development. Mutations in the Atlastin gene (SPG3A) account for approximately 10% of all autosomal dominant HSPs, while mutations in the Spastin gene (SPG4) account for almost 40%.

## CHROMOSOMAL LOCATION

Genetic locus: ATL1 (human) mapping to 14q22.1; At11 (mouse) mapping to 12 C2.

## SOURCE

Atlastin (H-37) is a rabbit polyclonal antibody raised against amino acids 514-550 mapping at the C-terminus of Atlastin of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

Atlastin (H-37) is recommended for detection of Atlastin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Atlastin (H-37) is also recommended for detection of Atlastin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Atlastin siRNA (h): sc-60225, Atlastin siRNA (m): sc-60226, Atlastin shRNA Plasmid (h): sc-60225-SH, Atlastin shRNA Plasmid (m): sc-60226-SH, Atlastin shRNA (h) Lentiviral Particles: sc-60225-V and Atlastin shRNA (m) Lentiviral Particles: sc-60226-V.

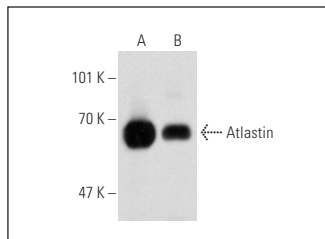
Molecular Weight of Atlastin: 64 kDa.

Positive Controls: human platelet extract: sc-363773 or mouse brain extract: sc-2253.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Atlastin (H-37): sc-67232. Western blot analysis of Atlastin expression in human platelet extract (A) and mouse brain tissue extract (B).

## SELECT PRODUCT CITATIONS

- Lee, J.E., et al. 2012. Nongenomic STAT5-dependent effects on Golgi apparatus and endoplasmic reticulum structure and function. *Am. J. Physiol., Cell Physiol.* 302: C804-C820.
- Zhao, J. and Hedera, P. 2013. Hereditary spastic paraplegia-causing mutations in atlastin-1 interfere with BMPRII trafficking. *Mol. Cell. Neurosci.* 52: 87-96.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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