

# AFG3L2 (K-15): sc-84686

## BACKGROUND

AFG3L2 (ATPase family gene 3-like 2), also known as Paraplegin-like protein, is a multi-pass membrane metalloprotease that contains one AAA (ATPase associated with diverse cellular activities) domain, a zinc-dependent binding motif, an RNA-binding region and an ATP/GTP binding site. Localizing to the mitochondrial membrane, AFG3L2 is ubiquitously expressed with highest expression levels in skeletal muscle and heart. AFG3L2 shares 69% similarity with the yeast Afg3 protein and 49% similarity with Paraplegin, a protein of mitochondria that is thought to be involved in signal transduction and chaperone-like activities. In mitochondria, AFG3L2 forms a complex with Paraplegin that is believed to regulate essential protein quality control. Mutations in the gene encoding either one of these proteins can result in hereditary spastic paraplegia, a degenerative spinal cord disorder that is characterized by muscle spasms, stiffness in the legs and, in some cases, incontinence.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: AFG3L2 (human) mapping to 18p11.21; Afg3l2 (mouse) mapping to 18 E1.

## SOURCE

AFG3L2 (K-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an extracellular domain of AFG3L2 of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84686 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

AFG3L2 (K-15) is recommended for detection of AFG3L2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

AFG3L2 (K-15) is also recommended for detection of AFG3L2 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for AFG3L2 siRNA (h): sc-72464, AFG3L2 siRNA (m): sc-140899, AFG3L2 shRNA Plasmid (h): sc-72464-SH, AFG3L2 shRNA Plasmid (m): sc-140899-SH, AFG3L2 shRNA (h) Lentiviral Particles: sc-72464-V and AFG3L2 shRNA (m) Lentiviral Particles: sc-140899-V.

Molecular Weight of full length AFG3L2: 80 kDa.

Molecular Weight of truncated AFG3L2: 65 kDa.

## 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<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) 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<sup>™</sup> Mounting Medium: sc-24941.

## 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.