

LONP2 (N-15): sc-164901

BACKGROUND

LONP2 (lon peptidase 2, peroxisomal), also known as LONP, LONPL or peroxisomal lon protease, is an 852 amino acid protein belonging to the peptidase S16 family. LONP2 assists in import of peroxisomal matrix proteins and is required for PTS2 (type 2 peroxisome targeting signal)-containing protein processing. As an ATP-dependent serine protease, LONP2 plays a role in degradation of polypeptides that are unassembled or incorrectly folded. The gene encoding LONP2 maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

REFERENCES

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2. Kühlenbäumer, G., et al. 2002. Giant axonal neuropathy (GAN): case report and two novel mutations in the gigaxonin gene. *Neurology* 58: 1273-1276.
3. Cho, J.H. 2004. Advances in the genetics of inflammatory bowel disease. *Curr. Gastroenterol. Rep.* 6: 467-473.
4. Mathew, C.G., et al. 2004. Genetics of inflammatory bowel disease: progress and prospects. *Hum. Mol. Genet.* 13 Spec. No. 1: R161-R168.
5. Kikuchi, M., et al. 2004. Proteomic analysis of rat liver peroxisome: presence of peroxisome-specific isozyme of Lon protease. *J. Biol. Chem.* 279: 421-428.
6. Ondrovicová, G., et al. 2005. Cleavage site selection within a folded substrate by the ATP-dependent lon protease. *J. Biol. Chem.* 280: 25103-25110.
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CHROMOSOMAL LOCATION

Genetic locus: LONP2 (human) mapping to 16q12.1; Lonp2 (mouse) mapping to 8 C3.

SOURCE

LONP2 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of LONP2 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.

Blocking peptide available for competition studies, sc-164901 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

LONP2 (N-15) is recommended for detection of LONP2 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); non cross-reactive with LONP1.

LONP2 (N-15) is also recommended for detection of LONP2 in additional species, including canine, bovine and avian.

Suitable for use as control antibody for LONP2 siRNA (h): sc-92987, LONP2 siRNA (m): sc-149013, LONP2 shRNA Plasmid (h): sc-92987-SH, LONP2 shRNA Plasmid (m): sc-149013-SH, LONP2 shRNA (h) Lentiviral Particles: sc-92987-V and LONP2 shRNA (m) Lentiviral Particles: sc-149013-V.

Molecular Weight of LONP2: 95 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.