SANTA CRUZ BIOTECHNOLOGY, INC.

LONP1 (3B2): sc-293244

BACKGROUND

LONP1 (Lon peptidase 1, mitochondrial), also known as LON, PIM1 or PRSS15, is a 959 amino acid mitochondrial matrix protein belonging to the peptidase S16 family. As an ATP-powered protease, LONP1 has been found to preferentially bind a G-rich single-stranded DNA sequence of light and heavy chain promoters of the mitochondrial genome, which play a role in DNA transcription and replication. LONP1 is required for intramitochondrial proteolysis and is involved in catalysis of the first steps of protein degradation. While ubiquitously expressed, LONP1 is expressed at highest levels in heart, brain, duodenum, lung, liver and skeletal muscle. LONP1 protects mitochondrial function and cellular viability by degrading the oxidized, hydrophobic form of aconitase following oxidative modification. LONP1 contains one Lon domain, and is encoded by a gene that maps to human chromosome 19p13.3 and mouse chromosome 17 D.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: LONP1 (human) mapping to 19p13.3.

RESEARCH USE

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

SOURCE

LONP1 (3B2) is a mouse monoclonal antibody raised against amino acids 661-761 of LONP1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

LONP1 (3B2) is recommended for detection of LONP1 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

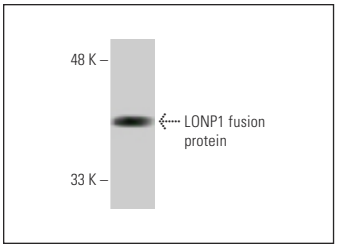
Suitable for use as control antibody for LONP1 siRNA (h): sc-97290, LONP1 shRNA Plasmid (h): sc-97290-SH and LONP1 shRNA (h) Lentiviral Particles: sc-97290-V.

Molecular Weight of LONP1: 100 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



LONP1 (3B2): sc-293244. Western blot analysis of human recombinant LONP1 fusion protein.

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 for detailed protocols and support products.