

LULL1 (D-20): sc-240577

BACKGROUND

LULL1 (luminal domain like LAP1), also known as NET9, IFRG15 or TOR1AIP2 (torsinA interacting protein 2), is a 470 amino acid endoplasmic reticulum single-pass membrane protein belonging to the TOR1AIP family. LULL1 interacts with torsinA, an essential AAA⁺ ATPase found in the endoplasmic reticulum (ER) and nuclear envelope (NE) of higher eukaryotes. LULL1 regulates the distribution and activity of torsinA within the ER and NE lumen and reveals functional defects in mutant torsinA, which is responsible for DYT1 dystonia, a neurodevelopmental disease caused by an in-frame deletion (DeltaGAG) in the gene encoding torsinA. The gene encoding LULL1 maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome.

REFERENCES

1. Blackwood, D.H., et al. 2001. Schizophrenia and affective disorders— cosegregation with a translocation at chromosome 1q42 that directly disrupts brain-expressed genes: clinical and P300 findings in a family. *Am. J. Hum. Genet.* 69: 428-433
2. Gonzalez-Alegre, P. and Paulson, H.L. 2004. Aberrant cellular behavior of mutant torsinA implicates nuclear envelope dysfunction in DYT1 dystonia. *J. Neurosci.* 24: 2593-2601.
3. Goodchild, R.E. and Dauer, W.T. 2005. The AAA⁺ protein torsinA interacts with a conserved domain present in LAP1 and a novel ER protein. *J. Cell Biol.* 168: 855-862.
4. Misbahuddin, A., et al. 2005. Mutant torsinA, which causes early-onset primary torsion dystonia, is redistributed to membranous structures enriched in vesicular monoamine transporter in cultured human SH-SY5Y cells. *Mov. Disord.* 20: 432-440.
5. Goodchild, R.E., et al. 2005. Loss of the dystonia-associated protein torsinA selectively disrupts the neuronal nuclear envelope. *Neuron* 48: 923-932.
6. Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. *Anticancer Res.* 26: 953-959.
7. Naismith, T.V., et al. 2009. Interaction of torsinA with its major binding partners is impaired by the dystonia-associated DeltaGAG deletion. *J. Biol. Chem.* 284: 27866-27874.

CHROMOSOMAL LOCATION

Genetic locus: TOR1AIP2 (human) mapping to 1q25.2; Tor1aip2 (mouse) mapping to 1 G3.

SOURCE

LULL1 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LULL1 of human origin.

STORAGE

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

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-240577 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LULL1 (D-20) is recommended for detection of LULL1 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).

LULL1 (D-20) is also recommended for detection of LULL1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for LULL1 siRNA (h): sc-78981, LULL1 siRNA (m): sc-149142, LULL1 shRNA Plasmid (h): sc-78981-SH, LULL1 shRNA Plasmid (m): sc-149142-SH, LULL1 shRNA (h) Lentiviral Particles: sc-78981-V and LULL1 shRNA (m) Lentiviral Particles: sc-149142-V.

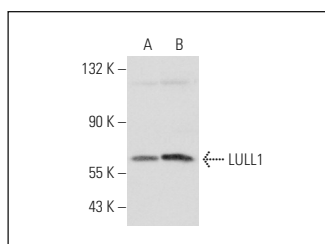
Molecular Weight of LULL1: 70 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409 or Jurkat whole cell lysate: sc-2204.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



LULL1 (D-20): sc-240577. Western blot analysis of LULL1 expression in IMR-32 (A) and Jurkat (B) whole cell lysates.

RESEARCH USE

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