

Laforin (E-19): sc-70291

BACKGROUND

Laforin (Lafora PTPase) is a dual specificity protein phosphatase expressed in heart, skeletal muscle, kidney, pancreas and brain. It belongs to the protein-tyrosine phosphatase family and contains one CBM20 (carbohydrate binding type-20) domain and one tyrosine-protein phosphatase domain. Laforin may be involved in the control of glycogen metabolism, particularly in monitoring for and preventing the formation of poorly branched glycogen molecules (polyglucosans). Laforin isoform 1 is primarily associated with polyribosomes at the endoplasmic reticulum, however, it is also found at the plasma membrane. Isoform 2 can be found in the nucleus. Defects in the EPM2A gene are a cause of progressive myoclonus epilepsy type 2 (EPM2), also known as Lafora disease. EPM2 is an autosomal recessive disease and a severe form of adolescent-onset progressive epilepsy.

REFERENCES

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3. Wang, J., et al. 2002. A unique carbohydrate binding domain targets the Lafora disease phosphatase to glycogen. *J. Biol. Chem.* 277: 2377-2380.
4. Ganesh, S., et al. 2002. Genotype-phenotype correlations for EPM2A mutations in Lafora's progressive myoclonus epilepsy: exon 1 mutations associate with an early-onset cognitive deficit subphenotype. *Hum. Mol. Genet.* 11: 1263-1271.
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6. Ki, C.S., et al. 2003. Two novel mutations in the EPM2A gene in a Korean patient with Lafora's progressive myoclonus epilepsy. *J. Hum. Genet.* 48: 51-54.
7. Ganesh, S., et al. 2003. The Lafora disease gene product Laforin interacts with HIRIP5, a phylogenetically conserved protein containing a NifU-like domain. *Hum. Mol. Genet.* 12: 2359-2368.
8. Ianzano, L., et al. 2003. Identification of a novel protein interacting with Laforin, the EPM2a progressive myoclonus epilepsy gene product. *Genomics* 81: 579-587.
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CHROMOSOMAL LOCATION

Genetic locus: EPM2A (human) mapping to 6q24.3; Epm2a (mouse) mapping to 10 A1.

SOURCE

Laforin (E-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Laforin 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-70291 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Laforin (E-19) is recommended for detection of Laforin 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).

Laforin (E-19) is also recommended for detection of Laforin in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Laforin siRNA (h): sc-75405, Laforin siRNA (m): sc-75406, Laforin shRNA Plasmid (h): sc-75405-SH, Laforin shRNA Plasmid (m): sc-75406-SH, Laforin shRNA (h) Lentiviral Particles: sc-75405-V and Laforin shRNA (m) Lentiviral Particles: sc-75406-V.

Molecular Weight of Laforin: 38 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.

RESEARCH USE

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

PROTOCOLS

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



Try **Laforin (k2A3): sc-135810**, our highly recommended monoclonal alternative to Laforin (E-19).