SANTA CRUZ BIOTECHNOLOGY, INC.

GLULD1 (C-14): sc-168010

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

GLULD1 (glutamate-ammonia ligase domain-containing protein 1), also known as lengsin or lens glutamine synthase-like (LGSN), is a 509 amino acid member of the glutamine synthetase family. Expressed at high levels in lens of the eye, GLULD1 is thought to be a chaperone for the reorganization of intermediate filament proteins during terminal differentiation in the lens or a component of the cytoskeleton. GLULD1 may be associated with the development of cataract disease. GLULD1 forms a dodecamer and interacts with the cytoskeletal proteins Phakinin and Vimentin. GLULD1 is expressed as three isoforms produced by alternative splicing events. The gene that encodes GLULD1 maps to human chromosome 6q12.

REFERENCES

1. Wistow, G., et al. 2002. Expressed sequence tag analysis of adult human iris for the NEIBank project: steroid-response factors and similarities with retinal pigment epithelium. Mol. Vis. 8: 185-195.
2. Barragan, I., et al. 2005. Mutation screening of three candidate genes, ELOVL5, SMAP1 and GLULD1 in autosomal recessive retinitis pigmentosa. Int. J. Mol. Med. 16: 1163-1167.
3. Grassi, F., et al. 2006. Structural and functional properties of lengsin, a pseudo-glutamine synthetase in the transparent human lens. Biochem. Biophys. Res. Commun. 350: 424-429.
4. Wistow, G. 2006. The NEIBank project for ocular genomics: data-mining gene expression in human and rodent eye tissues. Prog. Retin. Eye Res. 25: 43-77.
5. Wyatt, K., et al. 2006. Lengsin is a survivor of an ancient family of class I glutamine synthetases re-engineered by evolution for a role in the vertebrate lens. Structure 14: 1823-1834.
6. Nakatsugawa, M., et al. 2009. Novel spliced form of a lens protein as a novel lung cancer antigen, Lengsin splicing variant 4. Cancer Sci. 100: 1485-1493.

CHROMOSOMAL LOCATION

Genetic locus: LGSN (human) mapping to 6q12; Lgsn (mouse) mapping to 1 B.

SOURCE

GLULD1 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GLULD1 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-168010 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

GLULD1 (C-14) is recommended for detection of GLULD1 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).

Suitable for use as control antibody for GLULD1 siRNA (h): sc-95576, GLULD1 siRNA (m): sc-145447, GLULD1 shRNA Plasmid (h): sc-95576-SH, GLULD1 shRNA Plasmid (m): sc-145447-SH, GLULD1 shRNA (h) Lentiviral Particles: sc-95576-V and GLULD1 shRNA (m) Lentiviral Particles: sc-145447-V.

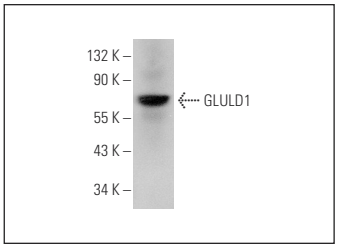
Molecular Weight of GLULD1: 57 kDa.

Positive Controls: Rat eye extract: sc-364805.

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



GLULD1 (C-14): sc-168010. Western blot analysis of GLULD1 expression in rat eye tissue extract.

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.