SANTA CRUZ BIOTECHNOLOGY, INC.

LCA5 (P-23): sc-133728

BACKGROUND

Leber congenital amaurosis (LCA) is one of the most common causes of hereditary blindness or severe visual impairment in infants. Mutations in several genes with diverse functions mapping to two loci have been implicated in LCA causation. These proteins are involved in processes such as photoreceptor development and maintenance, phototransduction, vitamin A metabolism and protein trafficking. LCA5, also known as Lebercilin, is a ciliary protein that is widely expressed during development and localizes to the connecting cilia of photoreceptors and to the microtubules, centrioles and primary cilia of cultured mammalian cells. The Leber congenital amaurosis 5-like protein (LCA5L) is a 670 amino acid protein that belongs to the LCA5 family.

REFERENCES

1. Mohamed, M.D., et al. 2003. Progression of phenotype in Leber's congenital amaurosis with a mutation at the LCA5 locus. Br. J. Ophthalmol. 87: 473-475.
2. Gerber, S., et al. 2007. Mutations in LCA5 are an uncommon cause of Leber congenital amaurosis (LCA) type II. Hum. Mutat. 28: 1245.
3. den Hollander, A.I., et al. 2007. Mutations in LCA5, encoding the ciliary protein lebercilin, cause Leber congenital amaurosis. Nat. Genet. 39: 889-895.
4. Ramprasad, V.L., et al. 2008. Identification of a novel splice-site mutation in the Lebercilin (LCA5) gene causing Leber congenital amaurosis. Mol. Vis. 14: 481-486.
5. den Hollander, A.I., et al. 2008. Leber congenital amaurosis: genes, proteins and disease mechanisms. Prog. Retin. Eye Res. 27: 391-419.
6. Jacobson, S.G., et al. 2009. Leber congenital amaurosis caused by Lebercilin (LCA5) mutation: retained photoreceptors adjacent to retinal disorganization. Mol. Vis. 15: 1098-1106.
7. Seong, M.W., et al. 2009. LCA5, a rare genetic cause of leber congenital amaurosis in Koreans. Ophthalmic Genet. 30: 54-55.

CHROMOSOMAL LOCATION

Genetic locus: LCA5 (human) mapping to 6q14.1.

SOURCE

LCA5 (P-23) is an affinity purified rabbit polyclonal antibody raised against synthetic LCA5 peptide of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

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.

APPLICATIONS

LCA5 (P-23) is recommended for detection of LCA5 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 LCA5 siRNA (h): sc-95465, LCA5 shRNA Plasmid (h): sc-95465-SH and LCA5 shRNA (h) Lentiviral Particles: sc-95465-V.

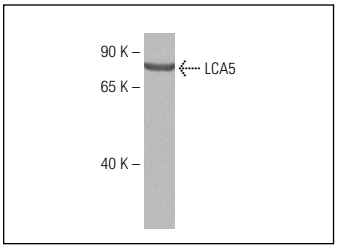
Molecular Weight of LCA5: 81 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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).

DATA



LCA5 (P-23): sc-133728. Western blot analysis of LCA5 expression in Hep G2 whole cell lysate.

PROTOCOLS

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