SANTA CRUZ BIOTECHNOLOGY, INC.

OCRL (G-15): sc-12088

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The inositol polyphosphate 5-phosphatases selectively remove the phosphate from the 5-position of various phosphatidylinositols, which generate second messengers in response to extracellular signals. OCRL1 is a type II 5-phosphatase that is mutated in the oculocerebrorenal syndrome of Lowe (OCRL). OCRL is a rare X-linked disorder that is characterized in part by congenital cataracts, mental retardation, muscular hypotonia and renal tubular dysfunction. OCRL1 has a high affinity for phosphatidylinositol 4,5-bisphosphate as well as inositol 1,4,5-trisphosphate and inositol 1,3,4,5-tetrakisphosphate as substrates. OCRL1 is localized to the Golgi complex and is thought to be part of the *trans*-Golgi network (TGN), which suggests that OCRL1 plays a role in protein sorting and trafficking within the cell.

REFERENCES

1. Zhang, X., et al. 1995. The protein deficient in Lowe syndrome is a phosphatidylinositol-4,5-bisphosphate 5-phosphatase. Proc. Natl. Acad. Sci. USA 92: 4853-4856.
2. Mitchell, C.A., et al. 1996. Regulation of second messengers by the inositol polyphosphate 5-phosphatases. Biochem. Soc. Trans. 24: 994-1000.
3. Zhang, X., et al. 1998. Phosphatidylinositol signalling reactions. Semin. Cell Dev. Biol. 9: 153-160.
4. Erneux, C., et al. 1998. The diversity and possible functions of the inositol polyphosphate 5-phosphatases. Biochim. Biophys. Acta 1436: 185-199.
5. Majerus, P.W., et al. 1999. The role of phosphatases in inositol signaling reactions. J. Biol. Chem. 274: 10669-10672.
6. Roschinger, W., et al. 2000. Carrier assessment in families with Lowe oculocerebrorenal syndrome: novel mutations in the OCRL1 gene and correlation of direct DNA diagnosis with ocular examination. Mol. Genet. Metab. 69: 213-222.
7. Dressman, M.A., et al. 2000. OCRL1, a PtdIns (4,5)P(2) 5-phosphatase, is localized to the *trans*-Golgi network of fibroblasts and epithelial cells. J. Histochem. Cytochem. 48: 179-190.

CHROMOSOMAL LOCATION

Genetic locus: OCRL (human) mapping to Xq25-q26.1; Ocrl (mouse) mapping to X A4.

SOURCE

OCRL (G-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of OCRL 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-12088 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

OCRL (G-15) is recommended for detection of OCRL of 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).

Suitable for use as control antibody for OCRL siRNA (h): sc-39073.

Molecular Weight of OCRL: 105 kDa.

Positive Controls: human lung tumor.

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.

PROTOCOLS

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