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OCRL1 Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 103	Source/Isotype: Rabbit	UniProt ID: #Q01968	Entrez-Gene Id: 4952
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Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

OCRL1 Antibody recognizes endogenous levels of total OCRL1 protein. This antibody also cross-reacts with a 51 kDa protein of unknown origin in some cell lines.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly88 of human OCRL1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

OCRL1 is an inositol 5-phosphatase that selectively dephosphorylates the 5 position of the inositol ring. Its substrates include phosphatidylinositol 4,5-bisphosphate, inositol 1,4,5-trisphosphate, and inositol 1,3,4,5-tetrakisphosphate (1). Research studies indicate that mutations in OCRL1 are linked to Oculocerebrorenal syndrome or Lowe syndrome, an X-linked disorder distinguished by mental retardation and congenital cataracts, as well as Dent's disease (2,3). OCRL1 interacts with several endocytic proteins, including clathrin, AP-2, and RabGTPases (4-7). OCRL1 is localized to the Golgi complex, endosomes, and late stage clathrin-coated pits (6,8). OCRL1 controls early endosome function (8), regulating membrane traffic from endosomes to the Golgi. It is also involved in cytokinesis (9) and cilia assembly (10).

Background References

1. Astle, M.V. et al. (2006) *IUBMB Life* 58, 451-6.
2. Attree, O. et al. (1992) *Nature* 358, 239-42.
3. Hoopes, R.R. et al. (2005) *Am J Hum Genet* 76, 260-7.
4. Erdmann, K.S. et al. (2007) *Dev Cell* 13, 377-90.
5. Mao, Y. et al. (2009) *EMBO J* 28, 1831-42.
6. Shin, H.W. et al. (2005) *J Cell Biol* 170, 607-18.
7. Hyvola, N. et al. (2006) *EMBO J* 25, 3750-61.
8. Choudhury, R. et al. (2005) *Mol Biol Cell* 16, 3467-79.
9. Vicinanza, M. et al. (2011) *EMBO J* 30, 4970-85.
10. Coon, B.G. et al. (2012) *Hum Mol Genet* 21, 1835-47.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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