Revision 1

Store at -20C

#4039

INPP4b Antibody

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H R Mk	Endogenous	110	Rabbit	#O15327	8821

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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

INPP4b Antibody detects endogenous levels of total INPP4b protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to an amino acid sequence at the carboxyl terminus of human INPP4b. Antibodies are purified by Protein A and peptide affinity chromatography.

Background

Phosphatidylinositol lipids and phosphoinositides are important second messengers, their generation controlling many cellular events. Intracellular levels of these molecules are regulated by phosphoinositide kinases and phosphatases. One of the best characterized lipid kinases is phosphoinositide 3-kinase (PI3K), which is responsible for phosphorylation on the D-3 position of the inositide head group (1). This action of PI3K catalyzes the production of phosphatidylinositol-3,4,5-triphosphate by phosphorylating phosphatidylinositol (PI), phosphatidylinositol-4-phosphate (PIP), and phosphatidylinositol-4,5-bisphosphate (PIP2). Growth factors and hormones trigger this phosphorylation event, which in turn coordinates cell growth, cell cycle entry, cell migration, and cell survival (1). PTEN, the well characterized partnering phosphatase, reverses this process by removing the phosphate from PI(3,4,5)P3 at the D-3 position to generate PI(4,5)P2 (1,2). Dephosphorylation on the D-5 position to generate PI(3,4)P2 occurs through the action of SHIP1 or SHIP2 (3), and dephosphorylation on the D-4 position to generate PI(3)P can occur through the action of inositol polyphosphate 4-phosphatase isoenzymes type I (INPP4a) and type II (INPP4b) (4,5). While INPP4a has been implicated in neuronal survival and megakaryocyte lineage determination (6,7), less is understood about INPP4b. It has been shown that two splice variants of INPP4b occur in mice, each showing distinct tissue distribution and subcellular localization (5,8).

Background References

1. Cantley, L.C. (2002) *Science* 296, 1655-7.
2. Myers, M.P. et al. (1998) *Proc Natl Acad Sci USA* 95, 13513-8.
3. Ware, M.D. et al. (1996) *Blood* 88, 2833-40.
4. Norris, F.A. et al. (1995) *J Biol Chem* 270, 16128-33.
5. Norris, F.A. et al. (1997) *J Biol Chem* 272, 23859-64.
6. Nystuen, A. et al. (2001) *Neuron* 32, 203-12.
7. Vyas, P. et al. (2000) *Proc Natl Acad Sci USA* 97, 13696-701.
8. Ferron, M. and Vacher, J. (2006) *Gene* 376, 152-61.

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

Cross-Reactivity Key

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

Trademarks and Patents

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.