



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

Store at -20C
#6484

PTP4A3 Antibody

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

Applications: W	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 24-26	Source/Isotype: Rabbit	UniProt ID: #O75365	Entrez-Gene Id: 11156
---------------------------	-----------------------------	-----------------------------------	---------------------------	----------------------------------	-------------------------------	---------------------------------

Product Usage Information

Application

Western Blotting

Dilution

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

PTP4A3 Antibody recognizes endogenous levels of total PTP4A3 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly62 of human PTP4A3 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

The Phosphatase of Regenerating Liver (PRL) family is a distinct group of protein tyrosine phosphatases (PTP), containing a signature phosphatase domain but otherwise lacking homology to known PTP proteins. There are currently three known members of the PRL family (PRL1-3). PRL-1 was the first family member to be identified; it was initially characterized as an immediate early gene (IEG) in regenerating liver and mitogen-treated fibroblasts (1). PRL-3, known widely as PTP4A3, is now the most well-characterized member of the PRL family, due to its important role in regulating cell proliferation, and possibly cancer metastasis. While specific substrates of the PRL-family proteins have remained largely undefined, a recent study in colon cancer cell lines reported that PTP4A3 dephosphorylated integrin β1 at Tyr783 (2). PTP4A3 was also shown to play a potential role in the progression of cardiac hypertrophy by inhibiting tyrosine phosphorylation of the docking protein p130 (3). Increased rates of both cell proliferation and motility have been observed in immortalized cell lines and murine lung tumor cells over-expressing PTP4A3 (3,4), and elevated levels of PTP4A3 protein are associated with a subset of human cancers (5,6).

Background References

1. Diamond, R.H. et al. (1994) *Mol Cell Biol* 14, 3752-62.
2. Tian, W. et al. (2012) *BMC Biochem* 13, 22.
3. Matter, W.F. et al. (2001) *Biochem Biophys Res Commun* 283, 1061-8.
4. Guo, K. et al. (2004) *Cancer Biol Ther* 3, 945-51.
5. Prczynicz, A. et al. (2010) *Folia Histochem Cytobiol* 48, 632-6.
6. Mayinuer, A. et al. (2013) *Ann Surg Oncol* 20, 305-17.

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 **M:** Mouse **R:** Rat

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

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.