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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

Lysophospholipid Phosphatase (LPP) 3. Rabbit Polyclonal Antibody

Lipid phosphate phosphohydrolase 3, EC 3.1.3.4 Phosphatidic acid phosphatase 2b, PAP2-beta, PAP-2b, PAP2b, Phosphatidate phosphohydrolase type 2b, Vascular endothelial growth factor and type 1 collagen-inducible protein, VCIP

BACKGROUND

Phosphatidic acid phosphatase type 2 (PAP2) was originally identified as a plasma membrane enzyme that catalyses the dephosphorylation of the putative second messenger, phosphatidic acid (PA) to diacylglycerol (DG) [1]. Subsequently, multiple isoforms of PAP2 were cloned [2-5]. It was found that these enzymes dephosphorylate a number of lipid phosphates *in vitro* other than PA, including the potent bioactive lipids, lysophosphatidic acid (LPA) and sphingosine 1-phosphate (S1P). Therefore, they have been renamed lipid phosphate phosphatases (LPPs). Currently, there are four members of this family called LPP1, LPP1a, LPP2 and LPP3 [6].

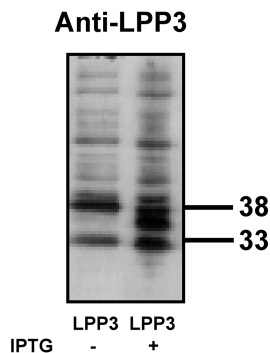
S1P [7] and LPA [8] regulate the proliferation, differentiation, apoptosis and migration of cells by binding to a family of G protein-coupled receptors. Thus, EDG1/S1P1, EDG3/S1P3, EDG5/S1P2/AGR16/H218, EDG6/S1P4 and EDG8/S1P5/nrg-1 are high affinity S1P receptors [7] whereas EDG2/LPA1, EDG4/LPA2 and EDG7/LPA3 have high affinity for LPA [8].

Recently, the over-expression of LPP1 was shown to limit LPA-stimulated signalling in Rat2 fibroblasts [9] and LPA-stimulated DNA synthesis in HEK 293 cells [10]. Similarly, over-expression of LPP1, LPP1a and LPP2 attenuate S1P-signalling to the p42/p44 mitogen activated protein kinase cascade [11].

IMMUNOGEN

Unique peptide derived from the human lysophospholipid phosphatase 3 protein.

Western blot analysis using LPP3 antibody on bacterially expressed LPP3 protein when untreated (-) and treated with with 0.1 mM IPTG (isopropyl-beta-D-thiogalactopyranoside) (+) at a dilution of 10 µg/ml.



ORDERING INFORMATION

CATALOG NUMBER

X1529P

SIZE

100 µg

FORM

Unconjugated

HOST/CLONE

Rabbit

FORMULATION

Provided as solution in phosphate buffered saline with 0.08% sodium azide

CONCENTRATION

See vial for concentration

ISOTYPE

IgG

APPLICATIONS

Western Blot

SPECIES REACTIVITY

Human

ACCESSION NUMBER

Human O14495

POSITIVE CONTROL/TISSUE EXPRESSION

Transfected HEK-293 cells

COMMENTS

This antibody can be used for Western blotting (10-15 µg/ml). Optimal concentration should be evaluated by serial dilutions.

PURIFICATION

Ammonium Sulfate Precipitation

SHIP CONDITIONS

Ship at ambient temperature, freeze upon arrival

STORAGE CUSTOMER

Product should be stored at -20°C. Aliquot to avoid freeze/thaw cycles

STABILITY

Products are stable for one year from purchase when stored properly

REFERENCES

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PRODUCT SPECIFIC REFERENCES