

## Lysophospholipid Phosphatase (LPP) 2. Rabbit Polyclonal Antibody , Human

EC 3.1.3.4

### 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].

### ORDERING INFORMATION

**CATALOG NUMBER**  
X1528P

**SIZE**  
100 µg

**FORM**  
Unconjugated

**HOST/CLONE**  
Rabbit

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

**CONCENTRATION**  
1 mg/ml

**ISOTYPE**  
IgG

**APPLICATIONS**  
Western Blot

### IMMUNOGEN

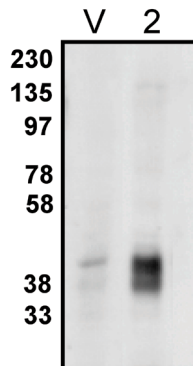
Unique peptide derived from the human lysophospholipid phosphatase 2 protein.

### SPECIES REACTIVITY

Human

### Legend:

Western blot analysis using LPP2 antibody on vector-controlled HEK-293 cells (V) and HEK-293 cells overexpressing LPP2 protein (2) at 1 µg/ml



**For research use only. Not for use in human diagnostics or therapeutics.**

#### **POSITIVE CONTROL/TISSUE EXPRESSION**

Transfected HEK-293 cells

#### **COMMENTS**

This antibody can be used for Western blotting (10-15  $\mu\text{g/ml}$ ). Optimal concentration should be evaluated by serial dilutions. **NOTE:** Boiling LPP2 with sample buffer will aggregate the protein. Lysates should be prepared by mixing cells with lysis buffer (possibly with extra detergent) to solubilize the protein before adding sample buffer and lysate SHOULD NOT be boiled/heated.

#### **SHIP CONDITIONS**

Ship at ambient temperature, freeze upon arrival

#### **STORAGE CUSTOMER**

Product should be stored at  $-20^{\circ}\text{C}$ . Aliquot to avoid freeze/thaw cycles

#### **STABILITY**

Products are stable for one year from purchase when stored properly

#### **REFERENCES**

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