

# Recombinant human BPNT1 protein

Catalog Number: ATGP0883

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-308aa

### UniProt No.

O95861

### NCBI Accession No.

NP\_006076

### Alternative Names

3'(2') 5'-bisphosphate nucleotidase 1, 3'(2'), 5'-bisphosphate nucleotidase 1, PIP, PAP-inositol-1,4-phosphatase

## PRODUCT SPECIFICATION

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### Molecular Weight

37.5 kDa (344aa) confirmed by MALDI-TOF (Molecular weight on SDS-PAGE will appear higher)

### Concentration

0.5mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol, 5mM DTT, 0.1M NaCl.

### Purity

> 90% by SDS-PAGE

### Tag

His-Tag

### Application

SDS-PAGE

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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### Description

BPNT1, also known as BPntase, PAP phosphatase or PIP (PAP-inositol-1, 4-phosphatase), is a member of the magnesium-dependent, lithium-sensitive phosphomono-esterase superfamily. using magnesium as a cofactor, BPNT1 catalyzes the conversion of PAPS (adenosine 3'-phosphate 5' phosphosulfate) to APS (adenosine 5'-phosphosulfate) and the conversion of PAP (3' (2') -phosphoadenosine 5' phosphate) to AMP (adenosine 5'-phosphate). Expressed ubiquitously with highest levels in brain and kidney, BPNT1 is potently inhibited by lithium, a drug used for the treatment of manic depression and bipolar affective disorder, suggesting a possible

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role for BPNT1 in the etiology of mood disorders. Recombinant human BPNT1 protein, fused to His-tag at N-terminus, was expressed in *E. coli* and purified by using conventional chromatography techniques.

## Amino acid Sequence

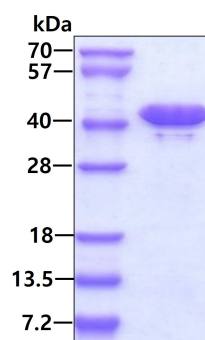
<MRGSHHHHHH GMASMTGGGQQ MGRDLYDDDD KDRWGS>MASS NTVLMRLVAS AYSIAQKAGM IVRRVIAEGD  
LGIVEKTCAT DLQTKADRLA QMSICSSLAR KFPKLTIIIGE EDLPSEEVDQ ELIEDSQWEE ILKQPCPSQY SAIKEEDLVV  
WVDPLDGTKE YTEGLLDNVT VLI GIAYEGK AIAGVINQPY YNYEAGPDAV LGRTIWGVLG LGAFGFQLKE VPAGKHIITT  
TRSHSNKLVT DCVAAMNPDA VLRVGGAGNK IIQLIEGKAS AYVFASPGCK KWDTCAPEVI LHAVGGKLTD IHGNVLQYHK  
DVKHMNSAGV LATLRNYDYY ASRVPESIKN ALVP

## General References

Shaltiel G., et al. (2002) Bipolar Disord. 4(5):302-6.  
Agam G., et al. (2003) J Psychiatr Res. 37(5):433-42.

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain