

BPNT1 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP57768**Specification****BPNT1 Polyclonal Antibody - Product Information**

Application	WB, IHC-P, IHC-F, IF, ICC, E
Primary Accession	O95861
Reactivity	Rat, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	33 KDa
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human BPNT1
Epitope Specificity	2-100/308
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	Preservative: 0.02% Proclin300, Constituents: 1% BSA, 0.01M PBS, pH7.4. Belongs to the inositol monophosphatase family.
SIMILARITY	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Important Note	

Background Descriptions

BPNT1 is a member of the magnesium-dependent, lithium-sensitive phosphomonoesterase 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 role for BPNT1 in the etiology of mood disorders. Inhibition of BPNT1 leads to an accumulation of PAP and subsequent inhibition of sulfotransferases which may result in changes in gene expression, changes in phosphatidylinositol second messenger function and/or changes in sulfation processes.

BPNT1 Polyclonal Antibody - Additional Information**Gene ID 10380****Other Names**

3'(2'), 5'-bisphosphate nucleotidase 1, 3.1.3.7, Bisphosphate 3'-nucleotidase 1, PAP-inositol 1, 4-phosphatase, PIP, BPNT1

Target/Specificity

Highly expressed in kidney, liver, pancreas and heart. Detected at lower levels in brain, placenta, lung and skeletal muscle.

Dilution

WB~~1:1000
IHC-P~~N/A
IHC-F~~N/A
IF~~1:50~200
ICC~~N/A
E~~N/A

Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

BPNT1 Polyclonal Antibody - Protein Information**Name** BPNT1**Function**

Phosphatase that converts 3'(2')-phosphoadenosine 5'- phosphate (PAP) to AMP and inositol 1,4-bisphosphate (Ins(1,4)P2) to inositol 4-phosphate (PubMed:10675562). Is also able to hydrolyze adenosine 3'-phosphate 5'-phosphosulfate (PAPS) to adenosine 5'- phosphosulfate (APS) (By similarity). Probably prevents the toxic accumulation of PAP, a compound which inhibits a variety of proteins, including PAPS-utilizing enzymes such as sulfotransferases, and RNA processing enzymes. Could also play a role in inositol recycling and phosphoinositide metabolism. Is not active on 3'-AMP, inositol-1- phosphate and inositol-1,4,5-triphosphate (PubMed:10675562).

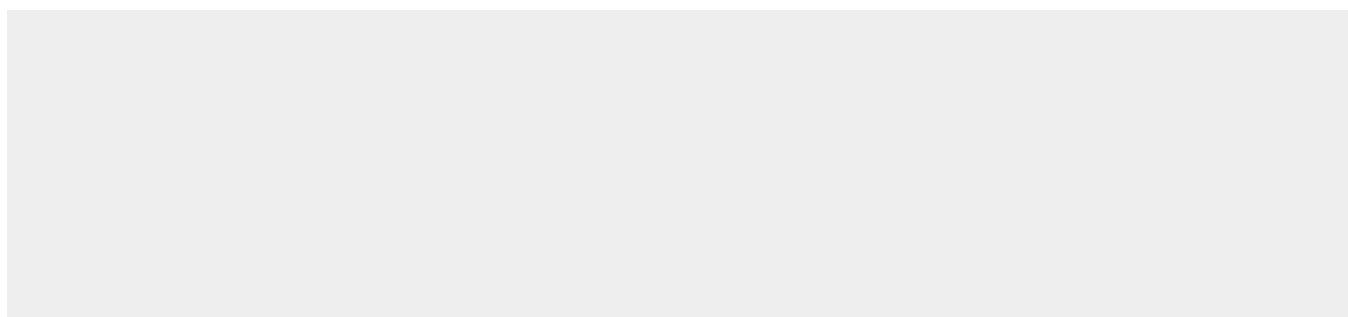
Tissue Location

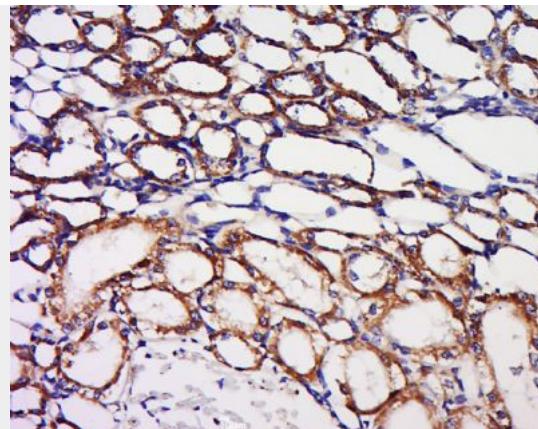
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BPNT1 Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

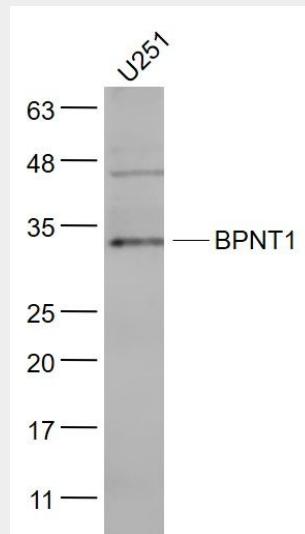
BPNT1 Polyclonal Antibody - Images



Tissue/cell: Mouse kidney tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-BPNT1 Polyclonal Antibody, Unconjugated(bs-20136R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Sample:

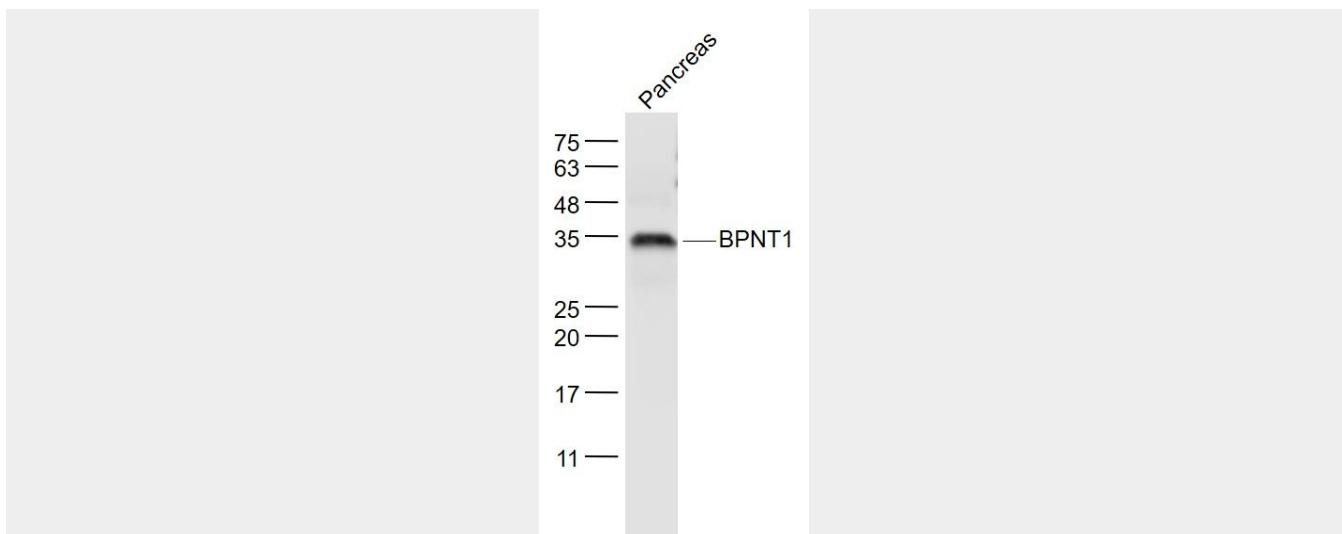
U251(Human) Cell Lysate at 30 ug

Primary: Anti- BPNT1 (bs-20136R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 33 kD

Observed band size: 33 kD

**Sample:**

Pancreas (Mouse) Lysate at 40 ug

Primary: Anti- BPNT1 (bs-20136R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 33 kD

Observed band size: 33 kD