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BPNT1 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP57768

Product Information

Application	WB, IHC-P, IHC-F, IF, ICC, E
Primary Accession	O95861
Reactivity	Rat, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	33392
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.
SIMILARITY	Belongs to the inositol monophosphatase family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
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.

Additional Information

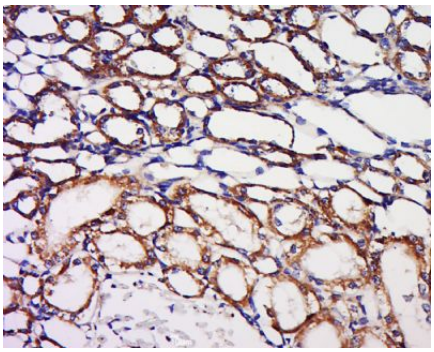
Gene ID	10380
Other Names	3'(2'), 5'-bisphosphate nucleotidase 1, 3.1.3.7, Bisphosphate 3'-nucleotidase 1, PAP-inositol 1, 4-phosphatase, PIP, BPNT1
Target/Specificity	Highly expressed in kidney, liver, pancreas and heart. Detected at lower levels in brain, placenta, lung and skeletal muscle.
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000

Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
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.

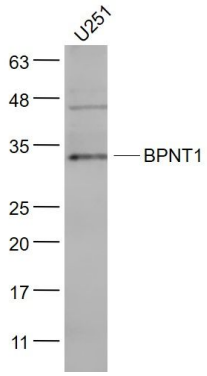
Protein Information

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

Images



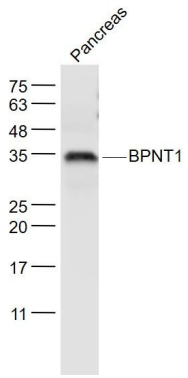
Tissue/cell: Mouse kidney tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;
Incubation: Anti-BPNT1 Polyclonal Antibody, Unconjugated(AP57768) 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 (AP57768) 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 (AP57768) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 33 kD

Observed band size: 33 kD



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.