Data Sheet (Cat.No.TMAB-03195)

Anti-BPNT1 Polyclonal Antibody

Product Details

Ig Type:	IgG
Reactivity:	Human,Mouse (predicted:Rat,Cow)
Molecular Weight:	Theoretical: 33 kDa. Actual: 33 kDa.
Purification:	Protein A purified

Applications

Verified Activity:	1. Sample: U251 (Human) Cell Lysate at 30 µg Primary: Anti-BPNT1 (TMAB-03195) at 1/300 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 33 kD Observed band size: 33 kD 2. Sample: Pancreas (Mouse) Lysate at 40 µg Primary: Anti-BPNT1 (TMAB-03195) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 33 kD Observed band size: 33 kD 3. Tissue/cell: Mouse kidney tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01 M, pH 6.0), Boiling bathing for 15 min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30 min; Blocking buffer (normal goat serum) at 37℃ for 20 min; Incubation: Anti-BPNT1 Polyclonal Antibody, Unconjugated (TMAB-03195) 1: 200, overnight at 4℃, followed by conjugation to the secondary antibody and DAB staining
Application:	WB,IHC-P,IHC-Fr,IF
Recommended	WB: 1:500-2000; IHC-P: 1:100-500; IHC-Fr: 1:100-500; IF: 1:100-500

Properties

Stability & Storage:	Store at 2℃-8℃ for 1 month. Store at -20℃ or -80℃ for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	KLH conjugated synthetic peptide: human BPNT1
Antigen Species:	Human
Gene ID:	10380
Uniprot ID:	O95861

Research Background

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.

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