

MIPP Polyclonal Antibody

Catalog # AP70950

Specification

MIPP Polyclonal Antibody - Product Information

Application Primary Accession Reactivity Host Clonality WB, IHC-P
<u>O9UNW1</u>
Human, Mouse, Rat
Rabbit
Polyclonal

MIPP Polyclonal Antibody - Additional Information

Gene ID 9562

Other Names

MINPP1; MIPP; Multiple inositol polyphosphate phosphatase 1; 2; 3-bisphosphoglycerate 3-phosphatase; 2, 3-BPG phosphatase; Inositol; 1, 3, 4, 5)-tetrakisphosphate 3-phosphatase; Ins(1, 3, 4, 5)P(4) 3-phosphatase

Dilution

WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/10000. Not yet tested in other applications. IHC-P~ \sim N/A

Format

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

Storage Conditions

-20°C

MIPP Polyclonal Antibody - Protein Information

Name MINPP1 (HGNC:7102)

Function

Multiple inositol polyphosphate phosphatase that hydrolyzes 1D-myo-inositol 1,3,4,5,6-pentakisphosphate (InsP5[2OH]) and 1D-myo- inositol hexakisphosphate (InsP6) to a range of less phosphorylated inositol phosphates. This regulates the availability of these various small molecule second messengers and metal chelators which control many aspects of cell physiology (PubMed:33257696, PubMed:36589890). Has a weak in vitro activity towards 1D-myo-inositol 1,4,5-trisphosphate which is unlikely to be physiologically relevant (PubMed:36589890). By regulating intracellular inositol polyphosphates pools, which act as metal chelators, it may control the availability of intracellular calcium and iron, which are important for proper neuronal development and homeostasis (PubMed:<a href="http://www.uniprot.org/citations/33257696"



target="_blank">33257696). May have a dual substrate specificity, and function as a 2,3-bisphosphoglycerate 3-phosphatase hydrolyzing 2,3-bisphosphoglycerate to 2-phosphoglycerate. 2,3- bisphosphoglycerate (BPG) is formed as part of the Rapoport-Luebering glycolytic bypass and is a regulator of systemic oxygen homeostasis as the major allosteric effector of hemoglobin (PubMed:18413611).

Cellular Location

Endoplasmic reticulum lumen {ECO:0000250|UniProtKB:O35217}. Secreted Cell membrane {ECO:0000250|UniProtKB:Q9Z2L6}. Note=Also associated with the plasma membrane in erythrocytes. {ECO:0000250|UniProtKB:Q9Z2L6}

Tissue Location

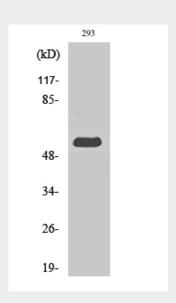
Widely expressed with highest levels in kidney, liver, cerebellum and placenta.

MIPP Polyclonal Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

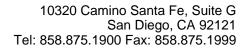
MIPP Polyclonal Antibody - Images



Western Blot analysis of various cells using MIPP Polyclonal Antibody

MIPP Polyclonal Antibody - Background

Acts as a phosphoinositide 5- and phosphoinositide 6- phosphatase and regulates cellular levels of inositol pentakisphosphate (InsP5) and inositol hexakisphosphate (InsP6). Also acts as a 2,3-bisphosphoglycerate 3-phosphatase, by mediating the dephosphorylation of





2,3-bisphosphoglycerate (2,3-BPG) to produce phospho-D-glycerate without formation of 3-phosphoglycerate. May play a role in bone development (endochondral ossification). May play a role in the transition of chondrocytes from proliferation to hypertrophy (By similarity).