10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# MINPP1 Antibody (N-term)

**Affinity Purified Rabbit Polyclonal Antibody (Pab)**

**Catalog # AP10126A**

## Specification

### MINPP1 Antibody (N-term) - Product Information

| | |
|---|---|
| Application | **WB, FC, IHC-P,E** |
| Primary Accession | Q9UNW1 |
| Other Accession | O35217, Q9Z2L6, NP_001171588.1, NP_001171589.1 |
| Reactivity | **Human** |
| Predicted | **Mouse, Rat** |
| Host | **Rabbit** |
| Clonality | **Polyclonal** |
| Isotype | **Rabbit IgG** |
| Calculated MW | **55051** |
| Antigen Region | **28-55** |

### MINPP1 Antibody (N-term) - Additional Information

**Gene ID** 9562

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

**Target/Specificity**
This MINPP1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 28-55 amino acids from the N-terminal region of human MINPP1.

**Dilution**
WB~~1:1000
FC~~1:10~50
IHC-P~~1:50~100
E~~Use at an assay dependent concentration.

**Format**
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**
MINPP1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

## MINPP1 Antibody (N-term) - 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: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}

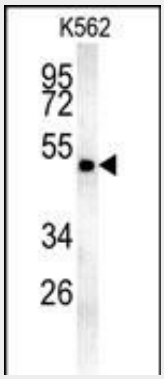
**Tissue Location**
Widely expressed with highest levels in kidney, liver, cerebellum and placenta.

## MINPP1 Antibody (N-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

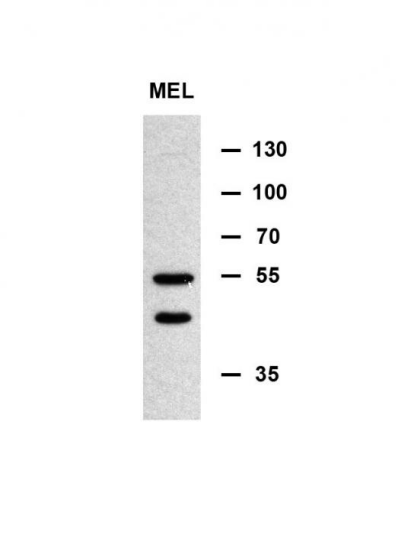
## MINPP1 Antibody (N-term) - Images



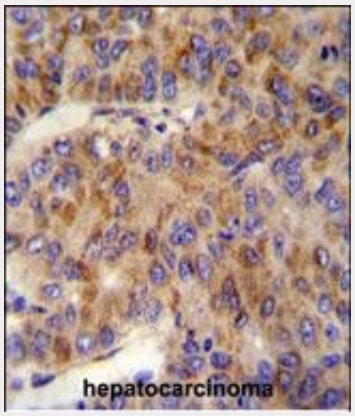

MINPP1 Antibody (N-term) (Cat. #AP10126a) western blot analysis in K562 cell line lysates

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

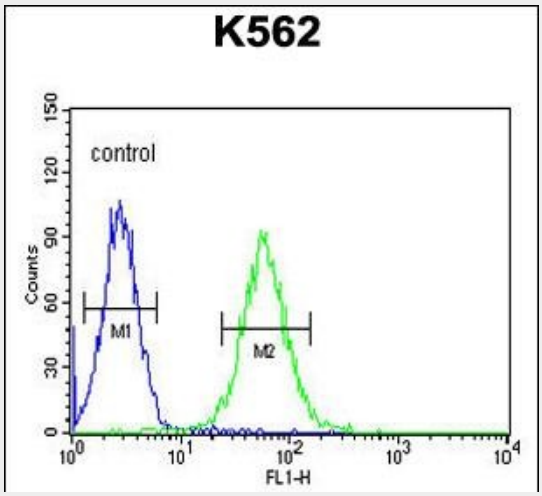
(35ug/lane).This demonstrates the MINPP1 antibody detected the MINPP1 protein (arrow).




MINPP1 Antibody (N-term) (Cat. #AP10126a) western blot analysis in murine erythroleukemia cell line lysates (35ug/lane).This demonstrates the MINPP1 antibody detected the MINPP1 protein (arrow).(Kindly offered by Doc. Norma)




MINPP1 Antibody (N-term) (Cat. #AP10126a) immunohistochemistry analysis in formalin fixed and paraffin embedded human hepatocarcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the MINPP1 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.



10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MINPP1 Antibody (N-term) (Cat. #AP10126a) flow cytometric analysis of K562 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

## MINPP1 Antibody (N-term) - Background

This gene encodes multiple inositol polyphosphate phosphatase; an enzyme that removes 3-phosphate from inositol phosphate substrates. It is the only enzyme known to hydrolzye inositol pentakisphosphate and inositol hexakisphosphate. This enzyme also converts 2,3 bisphosphoglycerate (2,3-BPG) to 2-phosphoglycerate; an activity formerly thought to be exclusive to 2,3-BPG synthase/2-phosphatase (BPGM) in the Rapoport-Luebering shunt of the glycolytic pathway.

## MINPP1 Antibody (N-term) - References

Newman, A.B., et al. J. Gerontol. A Biol. Sci. Med. Sci. 65(5):478-487(2010)
Cho, J., et al. Proc. Natl. Acad. Sci. U.S.A. 105(16):5998-6003(2008)
Lamesch, P., et al. Genomics 89(3):307-315(2007)
Grupe, A., et al. Am. J. Hum. Genet. 78(1):78-88(2006)
Liu, T., et al. J. Proteome Res. 4(6):2070-2080(2005)