

GMPS Antibody

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	76	Rabbit	#P49915	8833

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

GMPS Antibody recognizes endogenous levels of total GMPS protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human GMPS protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Guanine monophosphate synthase (GMPS) catalyzes the conversion of xanthosine 5'-monophosphate (XMP) into GMP during the final step of *de novo* guanine nucleotide synthesis. In addition to comprising the building blocks for DNA and RNA, guanine nucleotides also provide GTP for many signaling pathways that are important for multiple cellular processes (1). Chromosomal translocations involving MLL and GMPS is reported in some patients diagnosed with acute myeloid leukemia (2). Research studies indicate that genotoxic stress or nucleotide deprivation prompts translocation of GMPS to the nucleus where it complexes with USP7 and p53 to promote p53 stabilization (3). Additional studies show that the nuclear GMPS-USP7 protein complex deubiquitinates histone H2B in *Drosophila* (4).

Background References

1. Simon, M.I. et al. (1991) *Science* 252, 802-8.
2. Pegram, L.D. et al. (2000) *Blood* 96, 4360-2.
3. Reddy, B.A. et al. (2014) *Mol Cell* 53, 458-70.
4. van der Knaap, J.A. et al. (2005) *Mol Cell* 17, 695-707.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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