

# GMPS (N-14): sc-99430



The Power to Question

## BACKGROUND

Purines are critical for energy metabolism, cell signaling and cell reproduction and also function as precursors for coenzymes, energy transfer molecules, regulatory factors and proteins involved in RNA and DNA synthesis. GMPS (guanine monophosphate synthetase), also known as GMP synthetase, is a 693 amino acid cytoplasmic protein that is involved in purine biosynthesis. Existing as a homodimer, GMPS catalyzes the last step in the GMP synthesis pathway, namely the ATP-dependent amination of XMP to GMP. GMPS contains one GMP-binding domain and one glutamine amidotransferase type-1 domain through which it conveys its catalytic activity. Chromosomal translocations involving the gene encoding GMPS are associated with acute myeloid leukemias, suggesting a possible role for GMPS in carcinogenesis.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: GMPS (human) mapping to 3q25.31; Gmps (mouse) mapping to 3 E1.

## SOURCE

GMPS (N-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of GMPS of human origin.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-99430 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GMPS (N-14) is recommended for detection of GMPS of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

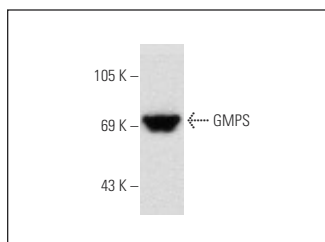
GMPS (N-14) is also recommended for detection of GMPS in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GMPS siRNA (h): sc-78183, GMPS siRNA (m): sc-145652, GMPS shRNA Plasmid (h): sc-78183-SH, GMPS shRNA Plasmid (m): sc-145652-SH, GMPS shRNA (h) Lentiviral Particles: sc-78183-V and GMPS shRNA (m) Lentiviral Particles: sc-145652-V.

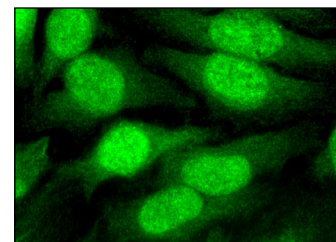
Molecular Weight of GMPS: 75 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

## DATA



GMPS (N-14): sc-99430. Western blot analysis of GMPS expression in Jurkat whole cell lysate.



GMPS (N-14): sc-99430. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **GMPS (C-5): sc-376163** or **GMPS (D-5): sc-374225**, our highly recommended monoclonal alternatives to GMPS (N-14).