abcam

ab184564

Anti-FPGS antibody [EPR11064]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR11064
Purity	Tissue culture supernatant

Reactivity data

WB

Tested

Species	Human
Dilution info	1/10000 - 1/50000
Notes	-

Predicted

Species	Mouse, Rat

Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/60
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information FPGS

Function	Catalyzes conversion of folates to polyglutamate derivatives allowing concentration of folate compounds in the cell and the intracellular retention of these cofactors, which are important substrates for most of the folate-dependent enzymes that are involved in one-carbon transfer reactions involved in purine, pyrimidine and amino acid synthesis. Unsubstituted reduced folates are the preferred substrates. Metabolizes methotrexate (MTX) to polyglutamates.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Folate polyglutamate synthase (FPGS) also known as folylpolyglutamate synthase plays an important role in the metabolic processing of folates. This enzyme catalyzes the addition of glutamate residues to folate and its derivatives. The molecular mass of FPGS is around 60 kDa. Researchers have identified its expression in various tissues with notable presence in liver bone marrow and placenta as well as in certain cancer cell lines.
Biological function summary	FPGS modifies folates converting them into polyglutamated forms that remain inside the cells. Its role in folate metabolism makes it essential for synthesizing nucleotides and some amino acids. FPGS does not function in isolation; it interacts with substrates in a series of metabolic complexes. Through its activity FPGS impacts DNA synthesis and repair which are critical for cell proliferation and survival.
Pathways	The function of FPGS integrates into the folate metabolism and one-carbon metabolic pathways. FPGS contributes to the regulation of folate homeostasis and is synchronous with proteins like dihydrofolate reductase (DHFR) that are important in these pathways. FPGS's activity ensures the maintenance of tetrahydrofolate derivatives necessary for thymidylate and purine synthesis.

Associated diseases and disorders	Alterations in FPGS activity correlate with the development of certain cancers and hematological disorders. Impaired FPGS function can lead to reduced cellular folate retention affecting nucleotide biosynthesis and increasing susceptibility to cancer. In leukemia for instance FPGS activity impacts therapeutic efficacy as it influences the cytotoxic effects of antifolate drugs. Its interaction with methotrexate an antifolate provides an essential mechanism of resistance in cancer treatment.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

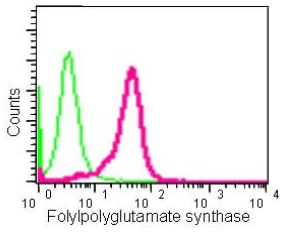
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

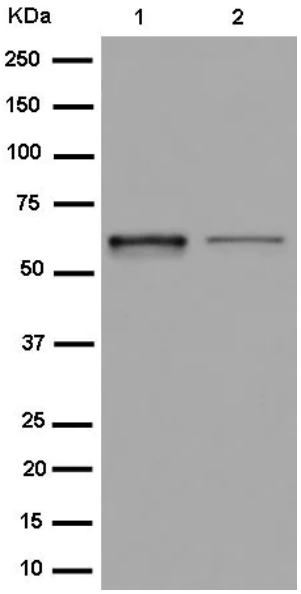
3 product images



Flow Cytometry (Intracellular) - Anti-FPGS antibody [EPR11064] (ab184564)

FPGS Flow Cytometry (Intracellular) staining using rabbit Anti-FPGS antibody

Intracellular Flow Cytometry analysis ofFPGS expression in paraformaldehyde-fixed HeLa cells using ab184564 at 1/60 dilution (red) and a rabbit IgG as negative control (green). Secondary antibody: Goat anti-rabbit IgG (FITC).



Western blot - Anti-FPGS antibody [EPR11064] (ab184564)

All lanes:
Western blot - Anti-FPGS antibody [EPR11064] (ab184564) at 1/10000 dilution

Lane 1:
JAR cell lysate at 20 µg

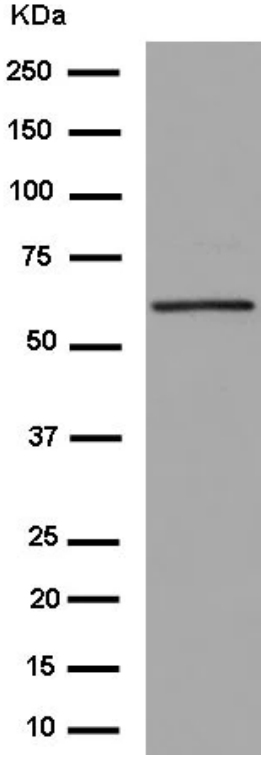
Lane 2:
HeLa cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 65 kDa

Observed band size: 65 kDa



Western blot - Anti-FPGS antibody [EPR11064] (ab184564)

All lanes:
Western blot - Anti-FPGS antibody [EPR11064] (ab184564) at 1/50000 dilution

All lanes:
K562 cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 65 kDa

Observed band size: 65 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.