abcam

Product datasheet

# Anti-GFPT1 antibody [EPR4854] ab125069

Recombinant RabMAb

★★★★★ 2 Abreviews 22 References 7 Images

## Overview

| | |
|---|---|
| **Product name** | Anti-GFPT1 antibody [EPR4854] |
| **Description** | Rabbit monoclonal [EPR4854] to GFPT1 |
| **Host species** | Rabbit |
| **Specificity** | The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat. |
| **Tested applications** | **Suitable for:** WB, IP, IHC-P<br>**Unsuitable for:** Flow Cyt or ICC/IF |
| **Species reactivity** | **Reacts with:** Mouse, Rat, Human |
| **Immunogen** | Synthetic peptide within Human GFPT1 aa 600-700. The exact sequence is proprietary. |
| **Positive control** | IHC-P: Human testis, and Human breast carcinoma tissue; WB: Human placenta lysate, MCF7, C6, MEF, 293T, JAR and HeLa cell line lysates, Mouse heart and Mouse cerebral cortex, Rat heart tissue lysate. IP: Jurkat cells. |
| **General notes** | This product is a recombinant monoclonal antibody, which offers several advantages including:<br>- High batch-to-batch consistency and reproducibility<br>- Improved sensitivity and specificity<br>- Long-term security of supply<br>- Animal-free production<br>For more information **see here**.<br>Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. |

## Properties

| | |
|---|---|
| **Form** | Liquid |
| **Storage instructions** | Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C. |
| **Storage buffer** | pH: 7.20<br>Preservative: 0.01% Sodium azide<br>Constituents: PBS, 40% Glycerol, 0.05% BSA |
| **Purity** | Protein A purified |
| **Clonality** | Monoclonal |

| | |
|---|---|
| **Clone number** | EPR4854 |
| **Isotype** | IgG |

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab125069 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| **WB** | ★★★★★ **(2)** | 1/200. Detects a band of approximately 79 kDa (predicted molecular weight: 79 kDa).<br>**For unpurified use at 1/1000 - 1/1000.** |
| **IP** | | 1/10 - 1/100. |
| **IHC-P** | | 1/1000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.<br>**For unpurified use at 1/100 - 1/250.**<br>See **IHC antigen retrieval protocols**.<br>The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat. |

**Application notes** Is unsuitable for Flow Cyt or ICC/IF.

## Target

**Function** Controls the flux of glucose into the hexosamine pathway. Most likely involved in regulating the availability of precursors for N- and O-linked glycosylation of proteins.

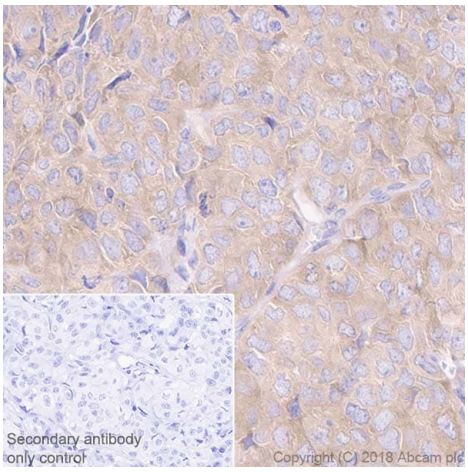
**Tissue specificity** Isoform 1 is predominantly expressed in skeletal muscle. Not expressed in brain. Seems to be selectively expressed in striated muscle.

**Pathway** Nucleotide-sugar biosynthesis; UDP-N-acetyl-alpha-D-glucosamine biosynthesis; alpha-D-glucosamine 6-phosphate from D-fructose 6-phosphate: step 1/1.

**Involvement in disease** Defects in GFPT1 are the cause of limb-girdle myasthenia with tubular aggregates (LGMTA) [MIM:610542]. A congenital myasthenic syndrome characterized by onset of proximal muscle weakness in the first decade. Individuals with this condition have a recognizable pattern of weakness of shoulder and pelvic girdle muscles, and sparing of ocular or facial muscles. EMG classically shows a decremental response to repeated nerve stimulation, a sign of neuromuscular junction dysfunction. Affected individuals show a favorable response to acetylcholinesterase (AChE) inhibitors.

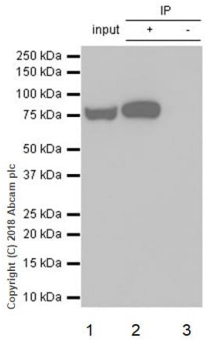
**Sequence similarities** Contains 1 glutamine amidotransferase type-2 domain.
Contains 2 SIS domains.

## Images



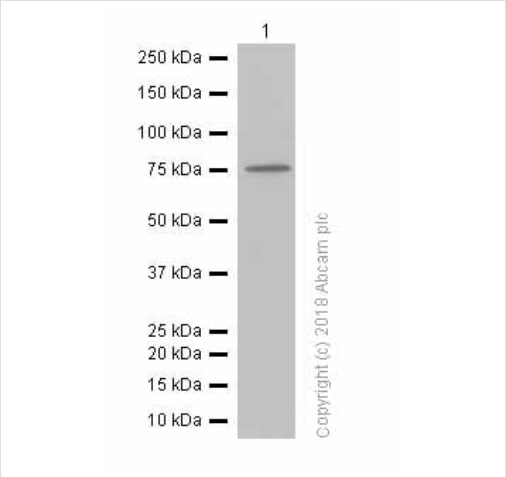

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GFPT1 antibody [EPR4854] (ab125069)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human breast carcinoma tissue sections labeling GFPT1 with Purified ab125069 at 1:1000 dilution (2.3 µg/ml). Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use)was used as the secondary antibody. Negative control:PBS instead of the primary antibody. Hematoxylin was used as a counterstain.




Immunoprecipitation - Anti-GFPT1 antibody [EPR4854] (ab125069)

ab125069 (purified) at 1:100 dilution (2µg) immunoprecipitating GFPT1 in Jurkat whole cell lysate.
Lane 1 (input): Jurkat (Human T cell leukemia T lymphocyte) whole cell lysate 10µg
Lane 2 (+): ab125069 & Jurkat whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab125069 in Jurkat whole cell lysate
For western blotting, VeriBlot for IP Detection Reagent (HRP) (**ab131366**) was used for detection at 1:1000 dilution.
Blocking and diluting buffer: 5% NFDM/TBST.




Western blot - Anti-GFPT1 antibody [EPR4854] (ab125069)

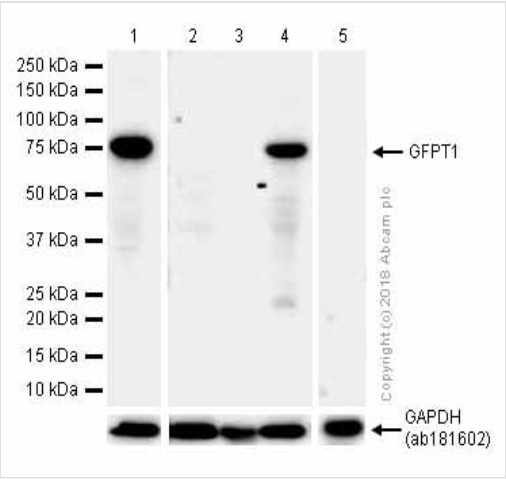
Anti-GFPT1 antibody [EPR4854] (ab125069) at 1/200 dilution (Purified) + C6 (Rat glial tumor glial cell) whole cell lysates at 15 µg

**Secondary**

Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

**Predicted band size:** 79 kDa

**Observed band size:** 79 kDa




Western blot - Anti-GFPT1 antibody [EPR4854] (ab125069)

**All lanes :** Anti-GFPT1 antibody [EPR4854] (ab125069) at 1/1000 dilution (Purified)

**Lane 1 :** MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysates

**Lane 2 :** Mouse heart lysates

**Lane 3 :** Mouse cerebral cortex lysates

**Lane 4 :** MEF (Mouse embryonic fibroblast (immortalized)) whole cell lysates

**Lane 5 :** Rat heart lysates

Lysates/proteins at 20 µg per lane.

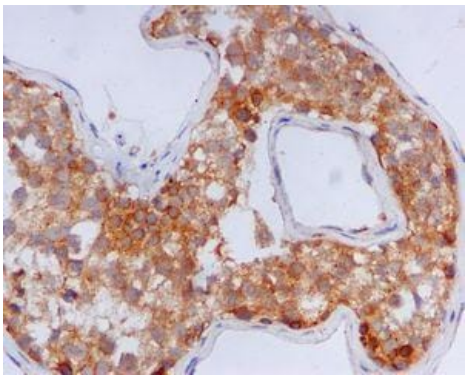
**Secondary**

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

**Predicted band size:** 79 kDa

**Observed band size:** 79 kDa

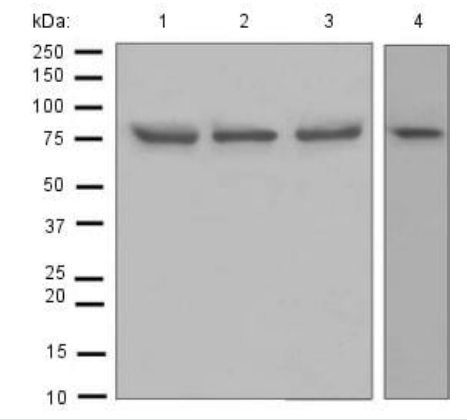
This antibody is not suitable to detect tissue lysate samples.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GFPT1 antibody [EPR4854] (ab125069)

ab125069, at a 1/100 dilution, staining GFPT1 in paraffin-embedded Human testis tissue by immunohistochemistry.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.




Western blot - Anti-GFPT1 antibody [EPR4854] (ab125069)

**All lanes :** Anti-GFPT1 antibody [EPR4854] (ab125069) at 1/1000 dilution

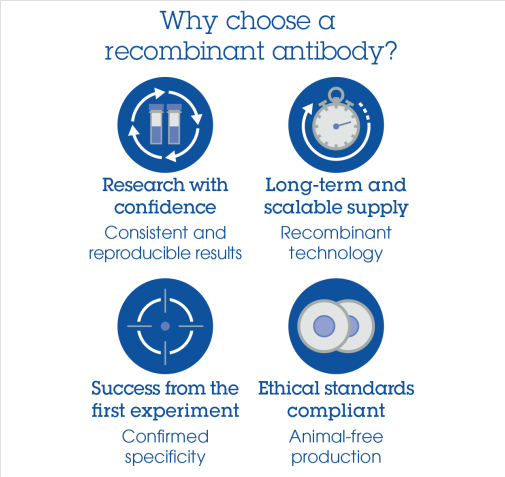
**Lane 1 :** 293T cell lysate
**Lane 2 :** JAR cell lysate
**Lane 3 :** HeLa cell lysate
**Lane 4 :** Human placenta lysate

Lysates/proteins at 10 µg per lane.

**Secondary**
**All lanes :** Goat anti-Rabbit HRP at 1/2000 dilution

Developed using the ECL technique.

**Predicted band size:** 79 kDa




Anti-GFPT1 antibody [EPR4854] (ab125069)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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