

Anti-Glutamine Synthetase antibody [EPR16661] ab197024

敲除验证
重组
RabMAb

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概述

产品名称	Anti-Glutamine Synthetase抗体[EPR16661]
描述	兔单克隆抗体[EPR16661] to Glutamine Synthetase
宿主	Rabbit
经测试应用	适用于: IHC-P, WB 不适用于: Flow Cyt
种属反应性	与反应: Mouse, Human
免疫原	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
阳性对照	WB: Human fetal liver, Human glioma, Mouse brain and Mouse spleen lysates; NIH/3T3 and HeLa cell lysates. IHC-P: Human hepatocellular carcinoma tissue.
常规说明	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
存储溶液	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
纯度	Protein A purified
克隆	单克隆
克隆编号	EPR16661

同种型

IgG

应用

The Abpromise guarantee

Abpromise™承诺保证使用ab197024于以下的经测试应用

“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
IHC-P		1/8000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		1/1000. Detects a band of approximately 42 kDa (predicted molecular weight: 42 kDa).

应用说明

Is unsuitable for Flow Cyt.

靶标

功能

This enzyme has 2 functions: it catalyzes the production of glutamine and 4-aminobutanoate (gamma-aminobutyric acid, GABA), the latter in a pyridoxal phosphate-independent manner (By similarity). Essential for proliferation of fetal skin fibroblasts.

疾病相关

Defects in GLUL are the cause of congenital systemic glutamine deficiency (CSGD) [MIM:610015]. CSGD is a rare developmental disorder with severe brain malformation resulting in multi-organ failure and neonatal death. Glutamine is largely absent from affected patients serum, urine and cerebrospinal fluid.

序列相似性

Belongs to the glutamine synthetase family.

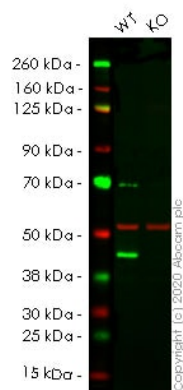
发展阶段

Expressed during early fetal stages.

细胞定位

Cytoplasm. Mitochondrion.

图片



Western blot - Anti-Glutamine Synthetase antibody [EPR16661] (ab197024)

All lanes : Anti-Glutamine Synthetase antibody [EPR16661] (ab197024) at 1/1000 dilution

Lane 1 : Wild-type HeLa cell lysate

Lane 2 : GLUL knockout HeLa cell lysate

Lysates/proteins at 40 µg per lane.

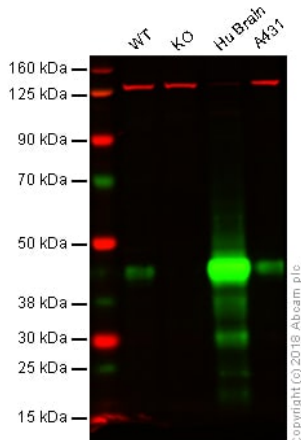
Performed under reducing conditions.

Predicted band size: 42 kDa

Observed band size: 42 kDa

Lanes 1- 2: Merged signal (red and green). Green - ab197024 observed at 42 kDa. Red - Anti-alpha Tubulin antibody [DM1A] - Loading Control (**ab7291**) observed at 50 kDa.

ab197024 was shown to react with Glutamine Synthetase in wild-type HeLa cells in western blot. Loss of signal was observed when knockout cell line **ab261737** (knockout cell lysate **ab256930**) was used. Wild-type HeLa and GLUL knockout HeLa cell lysates were subjected to SDS-PAGE. ab197024 and Anti-alpha Tubulin antibody [DM1A] - Loading Control (**ab7291**) overnight at 4°C at a 1 in 1000 Dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye®800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye®680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-Glutamine Synthetase antibody [EPR16661] (ab197024)

Lane 1: Wild-type HAP1 whole cell lysate (20 µg)

Lane 2: Glutamine Synthetase knockout HAP1 whole cell lysate (20 µg)

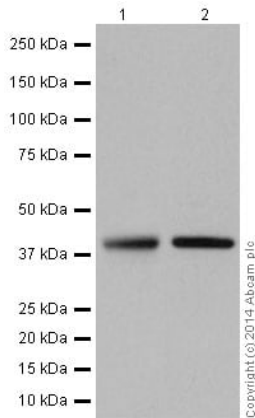
Lane 3: Human brain whole cell lysate (20 µg)

Lane 4: A431 whole cell lysate (20 µg)

Lanes 1 -4: Merged signal (red and green). Green - ab197024 observed at 42 kDa. Red - loading control, **ab18058**, observed at 130 kDa.

ab197024 was shown to specifically react with Glutamine Synthetase in wild-type HAP1 cells as signal was lost in Glutamine Synthetase knockout cells. Wild-type and Glutamine Synthetase knockout samples were subjected to SDS-PAGE. ab197024 and

ab18058 (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-Glutamine Synthetase antibody [EPR16661] (ab197024)

All lanes : Anti-Glutamine Synthetase antibody [EPR16661] (ab197024) at 1/1000 dilution

Lane 1 : Human fetal liver lysate

Lane 2 : HeLa (Human epithelial cells from cervix adenocarcinoma) lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

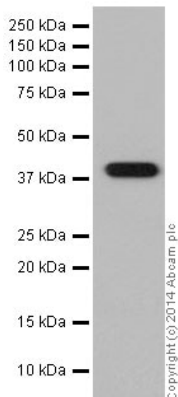
Predicted band size: 42 kDa

Observed band size: 42 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDm/TBST.

Anti-Glutamine Synthetase antibody [EPR16661] (ab197024) at 1/1000 dilution + Human glioma lysate at 10 µg



Western blot - Anti-Glutamine Synthetase antibody [EPR16661] (ab197024)

Secondary

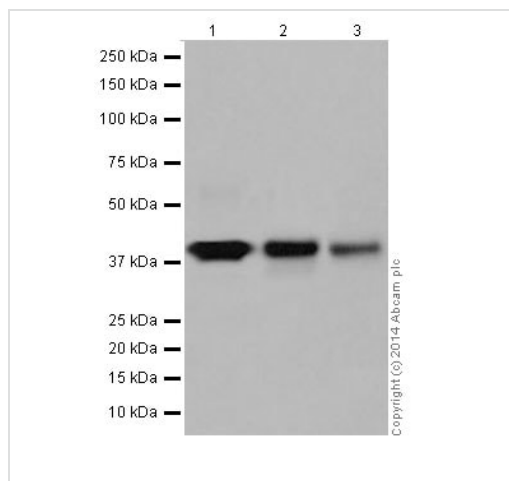
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 42 kDa

Observed band size: 42 kDa

Exposure time: 1 minute

Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot - Anti-Glutamine Synthetase antibody [EPR16661] (ab197024)

All lanes : Anti-Glutamine Synthetase antibody [EPR16661] (ab197024) at 1/1000 dilution

Lane 1 : Mouse brain lysate

Lane 2 : Mouse spleen lysate

Lane 3 : NIH/3T3 (Mouse embryo fibroblast cells) lysate

Lysates/proteins at 10 µg per lane.

Secondary

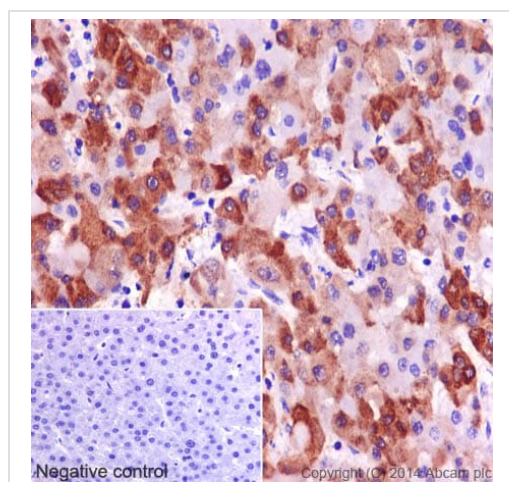
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 42 kDa

Observed band size: 42 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDM/TBST.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glutamine Synthetase antibody [EPR16661] (ab197024)

Immunohistochemical analysis of paraffin-embedded Human hepatocellular carcinoma tissue labeling Glutamine Synthetase with ab197024 at 1/8000 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) secondary antibody at 1/500 dilution. Cytoplasm staining on Human hepatocellular carcinoma tissue is observed. Counter stained with Hematoxylin.

Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-Glutamine Synthetase antibody [EPR16661]
(ab197024)

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