abcam

Product datasheet

Anti-Glutamine Synthetase antibody [EPR13022(B)] - BSA and Azide free ab240193

KO 評価済 リコンビナント RabMAb

画像数 11

製品の概要

製品名	Anti-Glutamine Synthetase antibody [EPR13022(B)] - BSA and Azide free
製品の詳細	Rabbit monoclonal [EPR13022(B)] to Glutamine Synthetase - BSA and Azide free
由来種	Rabbit
アプリケーション	**適用あり:** mIHC, WB, IHC-P, IHC-Fr **適用なし:** Flow Cyt,ICC/IF or IP
種交差性	**交差種:** Mouse, Rat, Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
ポジティブ・コントロール	WB: Human fetal liver lysate, mouse and rat spleen lysate Jurkat, HAP1 and HeLa whole cell lysate (**ab150035**); IHC-P: Human glioma and liver tissues, mouse liver tissue; IHC-Fr: Rat and Mouse cerebrum. mIHC: Human retina tissue.
特記事項	ab240193 is the carrier-free version of **ab176562**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. 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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit

monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C. Do Not Freeze.
バッファー	pH: 7.2 Constituent: PBS
キャリア・フリー	はい
精製度	Protein A purified
ポリ/モノ	モノクローナル
クローン名	EPR13022(B)
アイソタイプ	IgG

アプリケーション

The Abpromise guarantee **Abpromise保証は、** 次のテスト済みアプリケーションにおけるab240193の使用に適用されます

アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
mIHC		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Predicted molecular weight: 42 kDa.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. The mouse and rat recommendation is based on the WB results. This antibody may not be suitable for IHC with mouse or rat samples.
IHC-Fr		Use at an assay dependent concentration.

追加情報 Is unsuitable for Flow Cyt,ICC/IF or IP.

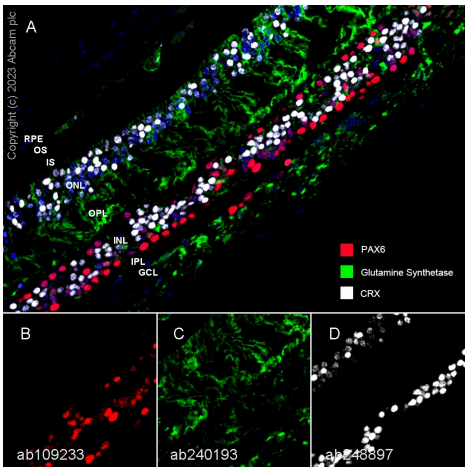
ターゲット情報

機能 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.

関連疾患 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.

配列類似性	Belongs to the glutamine synthetase family.
発生段階	Expressed during early fetal stages.
細胞内局在	Cytoplasm. Mitochondrion.

画像



Multiplex immunohistochemistry - Anti-Glutamine Synthetase antibody [EPR13022(B)] - BSA and Azide free (ab240193)

This data was developed using **ab176562**, the same antibody clone in a different buffer formulation.

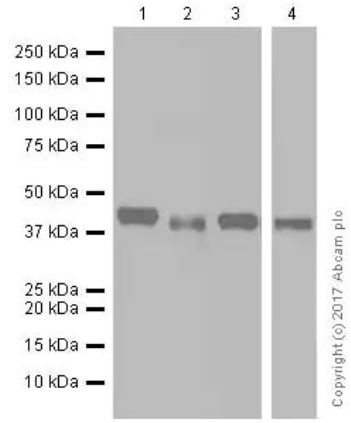
Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded Human retina tissue labeling PAX6, Glutamine Synthetase and CRX with **ab109233** at 1/10000 dilution, ab240193 at 1/20000 dilution and **ab248897** at 1/1000 dilution followed by a ready to use Opal Polymer HRP Ms + Rb secondary antibody. Nuclear counter stain used was DAPI.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

Panel A: merged staining of anti-CRX (gray; Opal™690), anti-Glutamine Synthetase (green; Opal™520) and anti-PAX6 (red; Opal™570) on human retina.
Panel B: anti-PAX6 stained on retinal progenitor cells.
Panel C: anti-Glutamine Synthetase stained on Müller glia.
Panel D: anti-CRX stained on subset cells of outer nuclear layer and inner nuclear layer.

The section was incubated in three rounds of staining: in the order of **ab248897**, ab240193, and **ab109233** for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.



Western blot - Anti-Glutamine Synthetase antibody [EPR13022(B)] - BSA and Azide free (ab240193)

All lanes : Anti-Glutamine Synthetase antibody [EPR13022(B)] (**ab176562**) at 1/2000 dilution

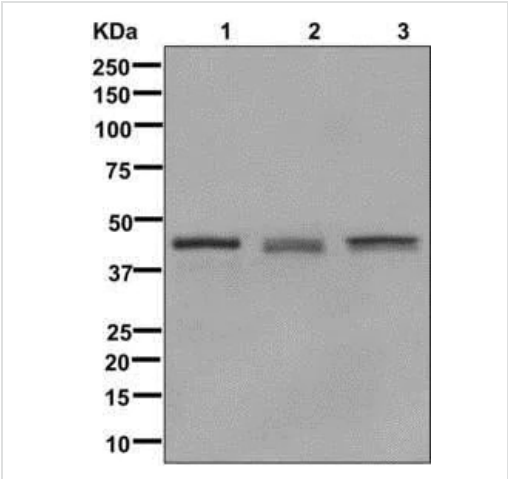
Lane 1 : Human fetal liver lysates at 20 µg
Lane 2 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates at 15 µg
Lane 3 : Mouse spleen lysates at 20 µg
Lane 4 : Rat spleen lysates at 20 µg

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 42 kDa
Observed band size: 42 kDa

This data was developed using **ab176562**, the same antibody clone in a different buffer formulation.

Blocking and diluting buffer: 5% NFDM/TBST



Western blot - Anti-Glutamine Synthetase antibody [EPR13022(B)] - BSA and Azide free (ab240193)

All lanes : Anti-Glutamine Synthetase antibody [EPR13022(B)] (**ab176562**) at 1/1000 dilution

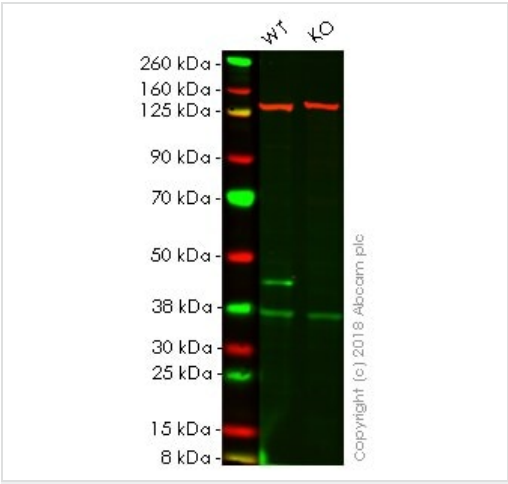
Lane 1 : Human fetal liver lysate
Lane 2 : Jurkat cell lysate
Lane 3 : HeLa cell lysate

Lysates/proteins at 10 µg per lane.

Developed using the ECL technique.

Predicted band size: 42 kDa

This data was developed using **ab176562**, the same antibody clone in a different buffer formulation.



Western blot - Anti-Glutamine Synthetase antibody [EPR13022(B)] - BSA and Azide free (ab240193)

All lanes : Anti-Glutamine Synthetase antibody [EPR13022(B)] (**ab176562**) at 1 µg

Lane 1 : Wild-type HAP1 whole cell lysate
Lane 2 : GLUL knockout HAP1 whole cell lysate

Lysates/proteins at 20 µg per lane.

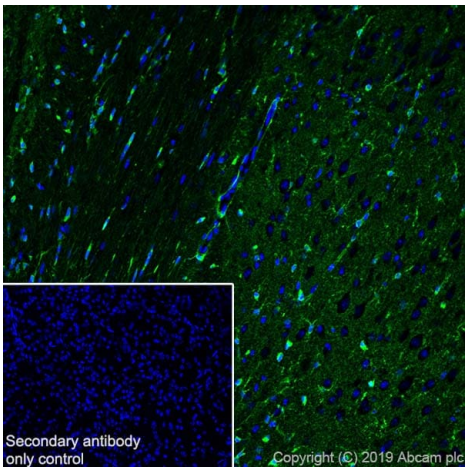
Predicted band size: 42 kDa

This data was developed using **ab176562**, the same antibody clone in a different buffer formulation:

Lanes 1 - 2: Merged signal (red and green). Green - **ab176562** observed at 42 kDa. Red - loading control, **ab130007**, observed at 130 kDa.

ab176562 was shown to recognize Glutamine Synthetase in wild-type HAP1 cells as signal was lost at the expected MW in GLUL knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and GLUL knockout samples were subjected to SDS-PAGE. Ab176562 and **ab130007** (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1 µg/ml 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.

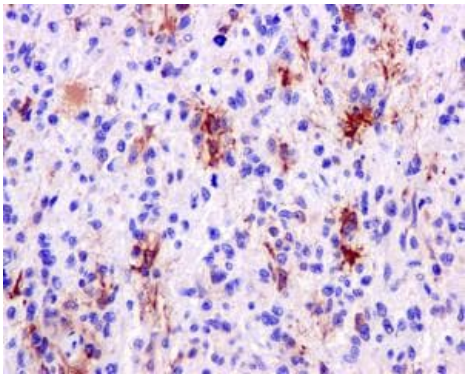


Immunohistochemistry (Frozen sections) - Anti-Glutamine Synthetase antibody [EPR13022(B)] - BSA and Azide free (ab240193)

Immunohistochemical analysis of 4% paraformaldehyde-fixed, 0.2% Triton X-100-permeabilised mouse cerebrum tissue staining glutamine synthetase with **ab176562** at 1/250 dilution, followed by alexaFluor®488 Goat anti-Rabbit secondary (**ab150077**) at 1/1000 dilution. Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20). DAPI was used as a nuclear counterstain.

Positive staining on mouse cerebrum (PMID: 23895693).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab176562**).

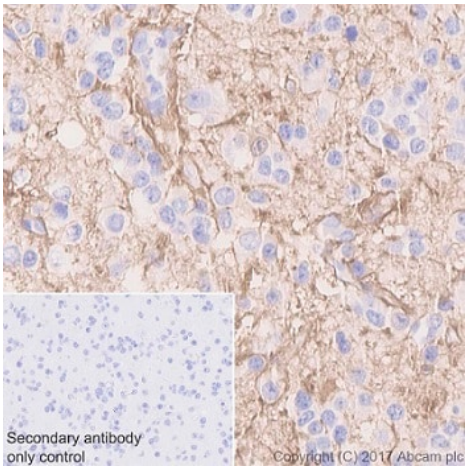


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glutamine Synthetase antibody [EPR13022(B)] - BSA and Azide free (ab240193)

Immunohistochemical analysis of formalin-fixed, paraffin-embedded, Human glioma tissue labeling Glutamine Synthetase with unpurified **ab176562** at a 1/100 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab176562**).

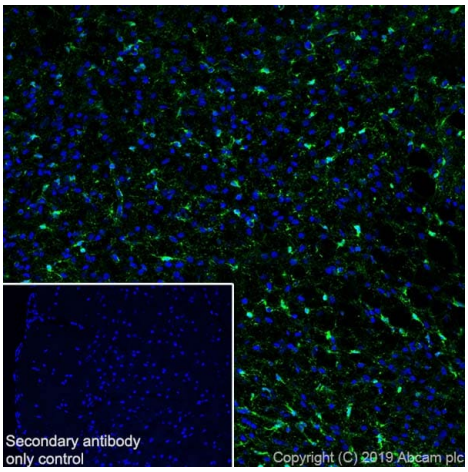
Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glutamine Synthetase antibody [EPR13022(B)] - BSA and Azide free (ab240193)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human glioma tissue sections labeling Glutamine Synthetase with purified **ab176562** at 1:500 dilution (0.18 µg/ml). Heat mediated antigen retrieval was performed using citrate Buffer, pH6.0. Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) secondary antibody was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab176562**).

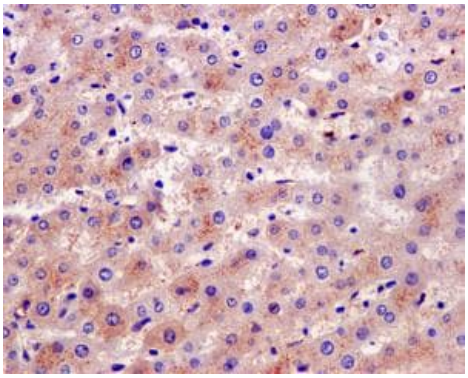


Immunohistochemistry (Frozen sections) - Anti-Glutamine Synthetase antibody [EPR13022(B)] - BSA and Azide free (ab240193)

Immunohistochemical analysis of 4% paraformaldehyde-fixed, 0.2% Triton X-100-permeabilised rat cerebrum tissue staining glutamine synthetase with **ab176562** at 1/250 dilution, followed by alexaFluor®488 Goat anti-Rabbit secondary (**ab150077**) at 1/1000 dilution. Heat mediated antigen retrieval was performed using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20). DAPI was used as a nuclear counterstain.

Positive staining on rat cerebrum (PMID: 23895693).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab176562**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glutamine Synthetase antibody [EPR13022(B)] - BSA and Azide free (ab240193)

Immunohistochemical analysis of formalin-fixed, paraffin-embedded, Human liver tissue labeling Glutamine Synthetase with unpurified **ab176562** at a 1/100 dilution.

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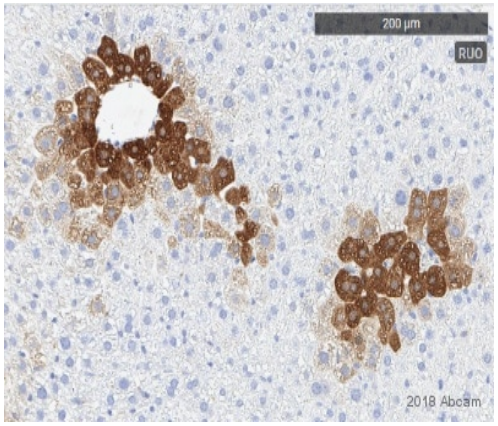
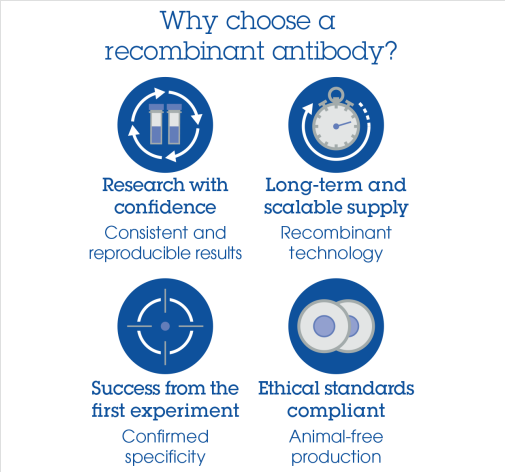


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glutamine Synthetase antibody [EPR13022(B)] - BSA and Azide free (ab240193)

This image is courtesy of Alex Van Engelenburg

ab176562 staining Glutamine Synthetasein Mouse Liver tissue sections by Immunohistochemistry (PFA perfusion fixed frozen sections). Tissue samples were fixed by perfusion with formaldehyde, blocked with PB **ab64226** for 10 minutes at room temperature and antigen retrieval was by heat mediation in citrate buffer. The sample was incubated with primary antibody (1/200) for 30 minutes. A HRP-conjugated Goat anti-rabbit polyclonal (1/200) was used as the secondary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab176562**).



Anti-Glutamine Synthetase antibody [EPR13022(B)]

- BSA and Azide free (ab240193)

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