abcam

Product datasheet

Anti-Glutamine Synthetase antibody [EPR16661] - BSA and Azide free ab251231

KO VALIDATED Recombinant RabMAb

2 Images

Overview

Product name	Anti-Glutamine Synthetase antibody [EPR16661] - BSA and Azide free
Description	Rabbit monoclonal [EPR16661] to Glutamine Synthetase - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HeLa cell lysate.
General notes	ab251231 is the carrier-free version of **ab197024**. 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**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR16661
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab251231 in the following tested applications.

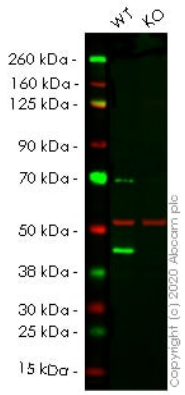
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Detects a band of approximately 42 kDa (predicted molecular weight: 42 kDa).
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target

Function	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.
Involvement in disease	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.
Sequence similarities	Belongs to the glutamine synthetase family.
Developmental stage	Expressed during early fetal stages.
Cellular localization	Cytoplasm. Mitochondrion.

Images



Western blot - Anti-Glutamine Synthetase antibody [EPR16661] - BSA and Azide free (ab251231)

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

This data was developed using the same antibody clone in a different buffer formation (**ab197024**).

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.

Anti-Glutamine Synthetase antibody [EPR16661] - BSA and Azide free (ab251231)

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