abcam

Product datasheet

Anti-IDH1 antibody [EPR21002] - BSA and Azide free ab242078

KO VALIDATED Recombinant RabMAb

10 Images

Overview

Product name	Anti-IDH1 antibody [EPR21002] - BSA and Azide free
Description	Rabbit monoclonal [EPR21002] to IDH1 - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), WB, IHC-P, IP **Unsuitable for:** ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: SH-SY5Y, HAP1 and HeLa cell lysates. IHC-P: Human stomach, glioblastoma and endometrium cancer tissues; Mouse and rat kidney tissues. Flow Cyt (intra): HeLa cells. IP: SH-SY5Y whole cell lysate.
General notes	ab242078 is the carrier-free version of **ab230949**. 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	EPR21002
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab242078 in the following tested applications.

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

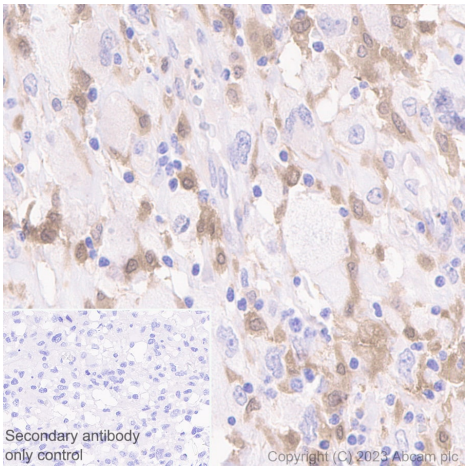
Application	Abreviews	Notes
Flow Cyt (Intra)		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Detects a band of approximately 47 kDa (predicted molecular weight: 46 kDa).
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
IP		Use at an assay dependent concentration.

Application notes Is unsuitable for ICC/IF.

Target

Involvement in disease	Glioma Genetic variations are associated with cartilaginous tumors such as enchondroma or chondrosarcoma. Mutations of Arg-132 to Cys, Gly or His abolish the conversion of isocitrate to alpha-ketoglutarate. Instead, alpha-ketoglutarate is converted to R(-)-2-hydroxyglutarate.
Sequence similarities	Belongs to the isocitrate and isopropylmalate dehydrogenases family.
Post-translational modifications	Acetylation at Lys-374 dramatically reduces catalytic activity.
Cellular localization	Cytoplasm. Peroxisome.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IDH1 antibody [EPR21002] - BSA and Azide free (ab242078)

Immunohistochemical analysis of paraffin-embedded human glioblastoma tissue labeling IDH1 with **ab230949** at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Counter stained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP).
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
Positive staining on human glioblastoma. The section was incubated with **ab230949** at 4°C overnight.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab230949**).

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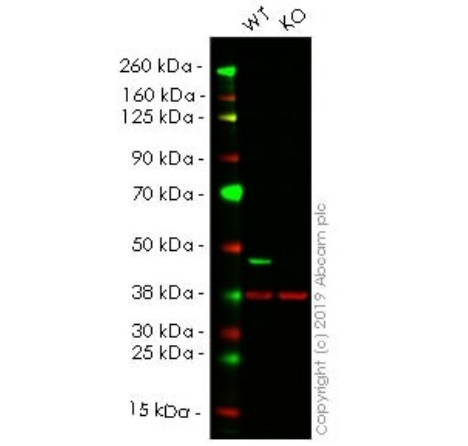


Western blot - Anti-IDH1 antibody [EPR21002] - BSA and Azide free (ab242078)

All lanes : Anti-IDH1 antibody [EPR21002] (**ab230949**) at 1/1000 dilution

Lane 1 : Wild-type HeLa cell lysate
Lane 2 : IDH1 knockout HeLa cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

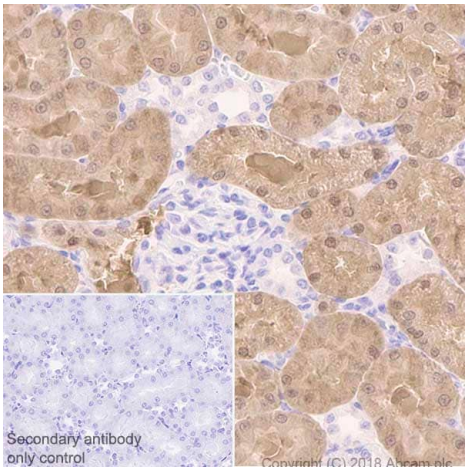
Predicted band size: 46 kDa

This data was developed using the same antibody clone in a different buffer formulation (**ab230949**).

Lanes 1- 2: Merged signal (red and green). Green - **ab230949** observed at 46 kDa. Red - Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) observed at 37 kDa.

ab230949 was shown to react with IDH1 in wild-type HeLa cells in western blot. Loss of signal was observed when knockout cell line **ab264916** (knockout cell lysate **ab257221**) was used. Wild-type HeLa and IDH1 knockout HeLa cell lysates were subjected to SDS-PAGE. Membrane was blocked for 1 hour at room temperature in

0.1% TBST with 3% non-fat dried milk. **ab230949** and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) 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.



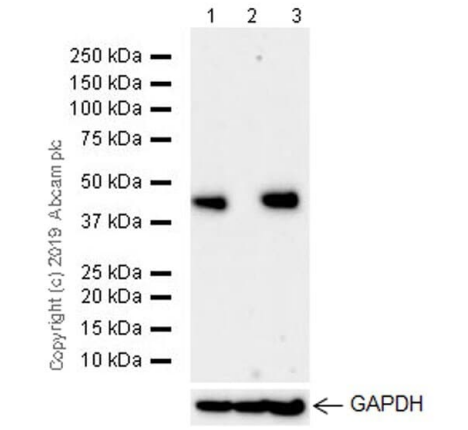
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IDH1 antibody [EPR21002] - BSA and Azide free (ab242078)

Immunohistochemical analysis of paraffin-embedded rat kidney tissue labeling IDH1 with **ab230949** at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Cytoplasmic and nuclear staining in rat kidney (PMID:30153799). Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab230949**).

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



Western blot - Anti-IDH1 antibody [EPR21002] - BSA and Azide free (ab242078)

All lanes : Anti-IDH1 antibody [EPR21002] (**ab230949**) at 1/1000 dilution

Lane 1 : Wild-type HAP1 whole cell lysate
Lane 2 : IDH1 knockout HAP1 whole cell lysate
Lane 3 : SH-SY5Y (human neuroblastoma epithelial cell), whole cell lysate

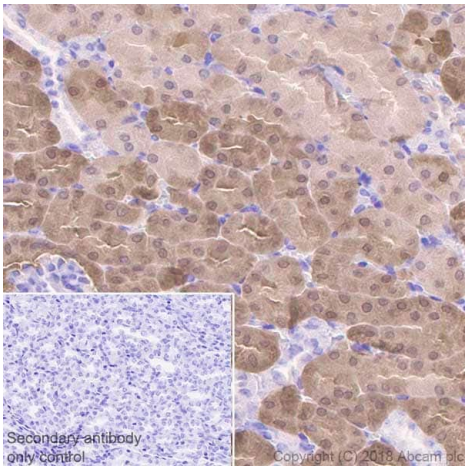
Lysates/proteins at 10 µg per lane.

Predicted band size: 46 kDa

Exposure time: 62 seconds

ab230949 was shown to specifically react with IDH1 in wild-type HAP1 cells as signal was lost in IDH1 knockout cells. Wild-type and IDH1 knockout samples were subjected to SDS-PAGE. **ab230949** and **ab181602** (Rabbit anti-GAPDH loading control) were

incubated 1 hour at room temperature at 1/1000 dilution and 1/200,000 dilution respectively. Blots were developed with Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) secondary antibody at 1/100,000 dilution for 1 hour at room temperature before imaging.



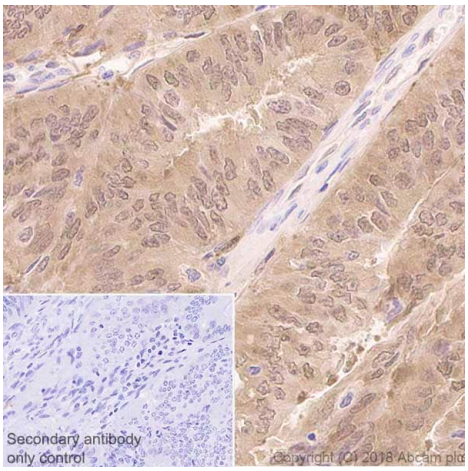
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IDH1 antibody [EPR21002] - BSA and Azide free (ab242078)

Immunohistochemical analysis of paraffin-embedded mouse kidney tissue labeling IDH1 with **ab230949** at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Cytoplasmic and nuclear staining in mouse kidney (PMID:30153799). Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab230949**).

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



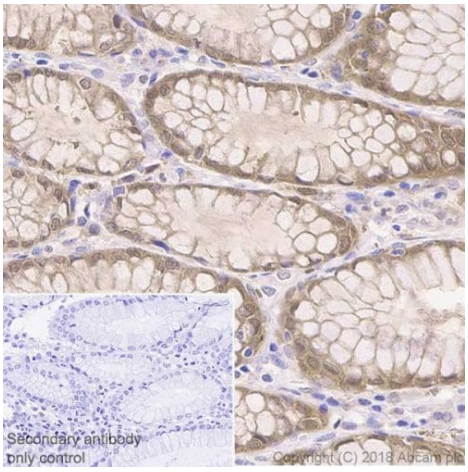
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IDH1 antibody [EPR21002] - BSA and Azide free (ab242078)

Immunohistochemical analysis of paraffin-embedded human endometrium cancer tissue labeling IDH1 with **ab230949** at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Cytoplasmic and nuclear staining in human endometrium cancer (PMID:29921847). Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab230949**).

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



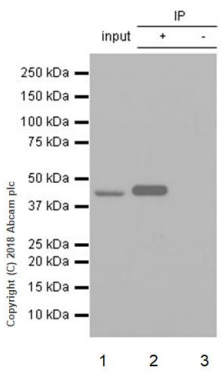
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IDH1 antibody [EPR21002] - BSA and Azide free (ab242078)

Immunohistochemical analysis of paraffin-embedded human stomach tissue labeling IDH1 with **ab230949** at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Cytoplasmic and nucleus staining in human stomach (PMID:27466503). Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab230949**).

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



Immunoprecipitation - Anti-IDH1 antibody [EPR21002] - BSA and Azide free (ab242078)

IDH1 was immunoprecipitated from 0.35 mg of SH-SY5Y (human neuroblastoma cell line from bone marrow) whole cell lysate with **ab230949** at 1/30 dilution. Western blot was performed from the immunoprecipitate using **ab230949** at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/10000 dilution.

Lane 1: SH-SY5Y whole cell lysate 10 µg (Input).

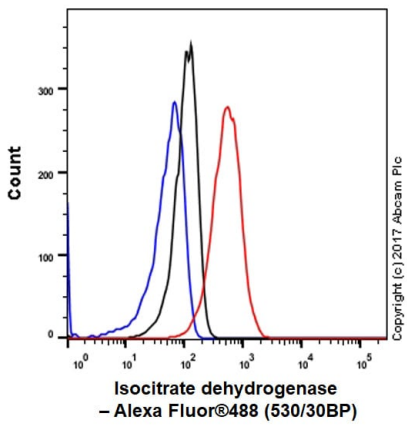
Lane 2: **ab230949** IP in SH-SY5Y whole cell lysate.

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of **ab230949** in SH-SY5Y whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 30 seconds.

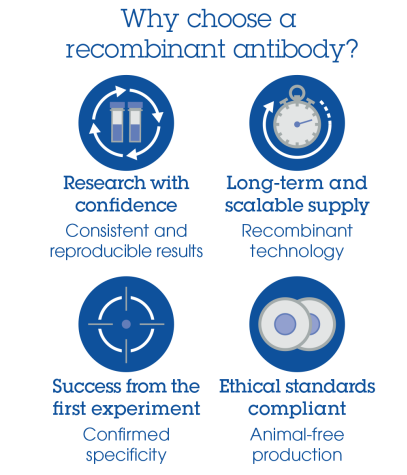
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab230949**).



Flow Cytometry (Intracellular) - Anti-IDH1 antibody [EPR21002] - BSA and Azide free (ab242078)

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cell line labeling IDH1 with **ab230949** at 1/60 dilution (**red**) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (**ab172730**) (**black**) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (**blue**). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) at 1/2000 dilution 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 (**ab230949**).



Anti-IDH1 antibody [EPR21002] - BSA and Azide free (ab242078)

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