abcam

ab196357

# Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free

Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357) is a rabbit recombinant monoclonal antibody provided in an azide free buffer. Suitable for **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF** in **Human, Mouse**.

- KO validated for confirmed specificity
- Suitable for in vitro and in vivo studies
- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb | KO Validated

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Carrier free** | Yes |
| **Clone number** | EPR3915 |
| **Purification technique** | Affinity purification Protein A |
| **Specificity** | We recommend not to boil the samples after lysis to get desired WB bands. |
| **Dissociation constant** | $7.7 \times 10^{-12}$ M |
| **Concentration** | 0.999 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

# Reactivity data

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | Perform heat-mediated antigen retrieval before commencing with IHC staining protocol. |

### Not recommended

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | - |
| **Notes** | Perform heat-mediated antigen retrieval before commencing with IHC staining protocol. |

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | - |
| **Notes** | Perform heat-mediated antigen retrieval before commencing with IHC staining protocol. |

## WB

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | Please check the parent abID, ab115730, for more information on dilutions. |

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | - |
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | - |
| **Notes** | - |

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | This product gave a positive signal in A549 (SLC2A1 knockout A549 cells used as a negative control) fixed with 100% methanol (5 min). |

### Expected

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. |

### Expected

| | |
|---|---|
| **Species** | Mouse |

| | |
|---|---|
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | - |
| **Notes** | - |

## Target data

See full target information SLC2A1

| | |
|---|---|
| **Function** | Facilitative glucose transporter, which is responsible for constitutive or basal glucose uptake (PubMed:10227690, PubMed:10954735, PubMed:18245775, PubMed:19449892, PubMed:25982116, PubMed:27078104, PubMed:32860739). Has a very broad substrate specificity; can transport a wide range of aldoses including both pentoses and hexoses (PubMed:18245775, PubMed:19449892). Most important energy carrier of the brain: present at the blood-brain barrier and assures the energy-independent, facilitative transport of glucose into the brain (PubMed:10227690). In association with BSG and NXNL1, promotes retinal cone survival by increasing glucose uptake into photoreceptors (By similarity). Required for mesendoderm differentiation (By similarity). |

## Storage

| | |
|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | +4°C |
| **Storage information** | Do Not Freeze |

## Notes

**What is this antibody validated in?**
Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse samples.

**What is the molecular weight of Glucose Transporter GLUT1?**
Anti-Glucose Transporter GLUT1 [EPR3915] - Low endotoxin, Azide free (ab196357) specifically detects a band for Glucose Transporter GLUT1 (UniProt: P11166) at a molecular weight of 54kDa.

**Specificity confirmed**
The specificity of Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357) has been confirmed by Western blot testing in SLC2A1 Knockout A549 cells.

**Other related products**
We have a range of other formats of antibody clone [EPR3915] also available for your convenience: ab115730, Alexa Fluor® 647 - ab195020, HRP - ab195021, Alexa Fluor® 488 - ab195359, Carrier free - ab196357, Alexa Fluor® 594 - ab206360, PE - ab209449, Alexa Fluor® 405 - ab210438, Carrier free - ab252403, APC - ab316298, FITC - ab322306, Biotin - ab323677

**Patented technology**
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

**What are the advantages of a recombinant monoclonal antibody?**
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 batch production

For more information, read more on recombinant antibodies.

**Conjugation ready**
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. 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.

**Compatibility**
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.

**What does low endotoxin mean?**
Our low endotoxin, azide-free formats have low endotoxin level (1 EU/mg, determined by the TAL assay) and are free from azide, to achieve consistent experimental results in functional assays.

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

**Activity summary** The Glucose Transporter GLUT1 also known as SLC2A1 is an important protein responsible for the transport of glucose across cell membranes. The GLUT1 transporter has a molecular weight of approximately 55 kDa. This protein is highly

| | |
|---|---|
| | expressed in erythrocytes endothelial cells lining blood vessels and in the blood-brain barrier. Its primary role is to facilitate the basal glucose uptake necessary for cellular metabolism particularly in tissues where glucose is a critical energy source. |
| **Biological function summary** | This glucose transporter plays a significant role in maintaining glucose homeostasis in the human body. GLUT1 functions independently and not as part of a complex. It ensures that glucose is available to cells with high metabolic demands including the brain and red blood cells where it remains important for survival and function. Its expression level can be influenced by various factors including hypoxia and insulin. |
| **Pathways** | GLUT1 is involved in the glycolysis and hypoxia-related pathways. It supports the glycolytic pathway by ensuring a sufficient supply of glucose to the cells which is then metabolized to produce ATP. Additionally during hypoxic conditions GLUT1 expression can increase aligning with proteins like HIF-1α which helps cells adapt by modifying their metabolism. This coordinated regulation permits cells to adjust their energy systems according to the oxygen availability. |
| **Associated diseases and disorders** | GLUT1 is implicated in glucose transporter type 1 deficiency syndrome (GLUT1 DS) and various forms of cancer. GLUT1 DS results from inadequate glucose transport into the brain presenting neurological symptoms due to energy deficiency. In cancer overexpression of GLUT1 links to increased glucose uptake and tumor growth a condition known to involve proteins like hexokinase. These associations underline GLUT1's contribution to both genetic defects and metabolic shifts in cancerous tissues. |

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

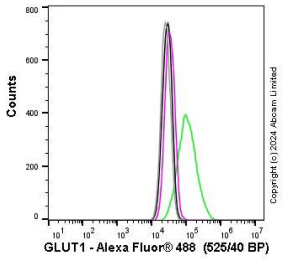
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

## 18 product images




### Flow Cytometry (Intracellular) - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

Glucose Transporter GLUT1 Flow Cytometry (Intracellular) staining of A549 cells using rabbit Anti-Glucose Transporter GLUT1 antibody

This data was developed using ab115730, the same antibody clone in a different buffer formulation.

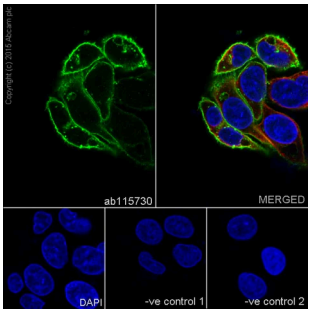
Flow cytometry overlay histogram showing wild-type A549 (green line) and A549-SLC2A1 knockout cells stained with ab115730 (magenta line). The cells were fixed with 4% formaldehyde (10 min) and then permeabilised with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS containing 10% normal goat serum to block non-specific protein-protein interaction followed by the antibody (ab115730) (1x $10^6$in 100µl at 0.04 µg/ml (1/12500)) for 30min at 22°C.

The secondary antibody Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was incubated at 1/4000 for 30min at 22°C

Isotype control antibody Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control was used at the same concentration and conditions as the primary antibody (wild-type A549 - black line, A549-SLC2A1 knockout - grey line). Unlabelled sample was also used as a control (this line is not shown for the purpose of simplicity).

Acquisition of >5000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.

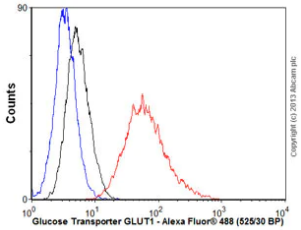
This antibody gave a positive signal in A549 WT Fixed with 80% methanol (5 min) / permeabilised with 0.1% PBS-Triton X-100 for 15 min under the same conditions.




### Immunocytochemistry/ Immunofluorescence - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

Glucose Transporter GLUT1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Glucose Transporter GLUT1 antibody

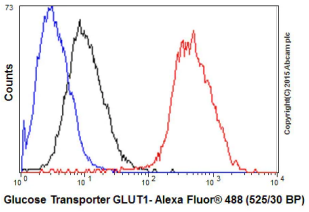
Immunofluorescence staining of HepG2 cells with purified ab115730 at a working dilution of 1/100, counter-stained with DAPI. The secondary antibody was Alexa Fluor® 488 goat anti-rabbit (ab150077), used at a dilution of 1/1000. ab7291, a mouse anti-tubulin antibody (1/1000), was used to stain tubulin along with ab150120 (Alexa Fluor® 594 goat anti-mouse, 1/1000), shown in the top right hand panel. The cells were fixed in 4% PFA and permeabilized using 0.1% Triton X 100. The negative controls are shown in bottom middle and right hand panels - for negative control 1, purified ab115730 was used at a dilution of 1/500 followed by an Alexa Fluor® 594 goat anti-mouse antibody (ab150120) at a dilution of 1/500. For negative control 2, ab7291 (mouse anti-tubulin) was used at a dilution of 1/500 followed by an Alexa Fluor® 488 goat anti-rabbit antibody (ab150077) at a dilution of 1/400.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab115730).




## Flow Cytometry (Intracellular) - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

Glucose Transporter GLUT1 Flow Cytometry (Intracellular) staining using rabbit Anti-Glucose Transporter GLUT1 antibody

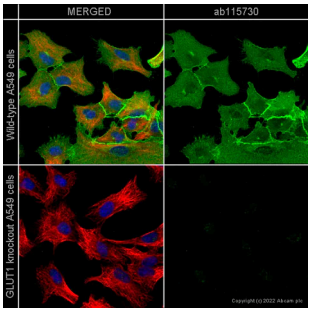
Overlay histogram showing HeLa cells stained with unpurified ab115730 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab115730, 1/1000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x$10^6$ cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in HeLa cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab115730).




## Flow Cytometry (Intracellular) - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

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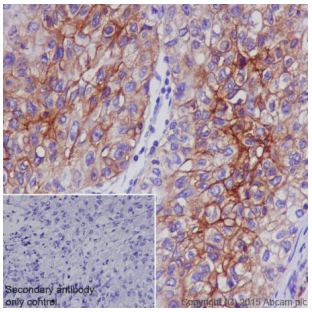
Overlay histogram showing Jurkat cells fixed in 4% PFA and stained with purified ab115730 at a dilution of 1/40 (red line). The secondary antibody used was Alexa Fluorr® 488 goat anti-rabbit at a dilution of 1/500. Rabbit monoclonal IgG was used as an isotype control (black line) and cells incubated in the absence of both primary and secondary antibody were used as a negative control (blue line).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab115730).




## Immunocytochemistry/ Immunofluorescence - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

Glucose Transporter GLUT1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Glucose Transporter GLUT1 antibody

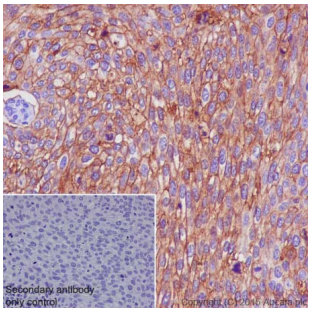
ab115730 staining SLC2A1 in wild-type A549 cells, with negative expression in SLC2A1 knockout A549 cells. The cells were fixed with 100% methanol (5 min), permeabilised with 0.1% Triton x-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab115730 at 1 µg/ml and ab7291, Mouse monoclonal [DM1A] to alpha Tubulin at 0.5 µg/ml. Cells were then incubated with ab150081, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and ab150119, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 647), pre-adsorbed at 1/1000 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).Image was acquired with a confocal microscope (Leica-Microsystems TCS SP8) and a single confocal section is shown. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab115730).




## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

Glucose Transporter GLUT1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Glucose Transporter GLUT1 antibody

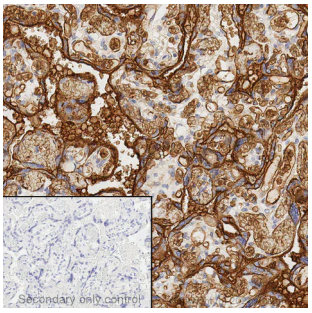
Immunohistochemical staining of paraffin embedded human lung carcinoma with purified ab115730 at a working dilution of 1/500. The secondary antibody used is ab97051, a goat anti-rabbit IgG (H&L) at a dilution of 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab115730).




## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

Glucose Transporter GLUT1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Glucose Transporter GLUT1 antibody

Immunohistochemical staining of paraffin embedded human cervical carcinoma with purified ab115730 at a working dilution of 1/500. The secondary antibody used is ab97051, a goat anti-rabbit IgG (H&L) at a dilution of 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab115730).



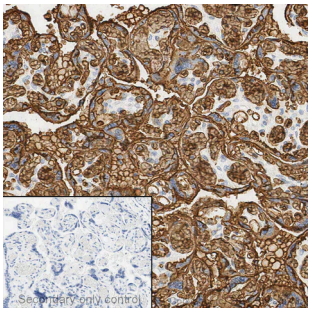

## Immunohistochemistry - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

Glucose Transporter GLUT1 Immunohistochemistry staining of Human placenta using rabbit Anti-Glucose Transporter GLUT1 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab115730).
Immunohistochemical analysis of formalin fixed paraffin embedded human placenta labelling Glucose Transporter GLUT1 with ab115730 at a concentration of 0.2µ/ml. The immunostaining was performed on a Leica Biosystems BOND® RX instrument with a Bond™ Polymer Refine Detection kit. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution 2) for 20mins.

ab115730 anti-Glucose Transporter GLUT1 antibody [EPR3915] was incubated for 15mins at room temperature. Sections were counterstained with Hematoxylin. Image inset shows absence of staining in secondary antibody only control.

Customers are encouraged to optimise antigen retrieval conditions, antibody concentration, incubation times and temperature for best results in their own IHC assay workflow (automated and manual)




## Immunohistochemistry - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

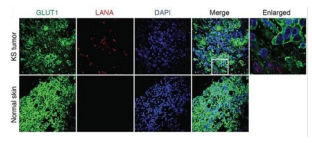
Glucose Transporter GLUT1 Immunohistochemistry staining of Human placenta using rabbit Anti-Glucose Transporter GLUT1 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab115730).
Immunohistochemical analysis of formalin fixed paraffin embedded human placenta labelling Glucose Transporter GLUT1 with ab115730 at a concentration of 0.05µ/ml.

The immunostaining was performed on a Ventana DISCOVERY ULTRA (Roche Tissue Diagnostics) instrument with an OptiView DAB IHC Detection Kit. Heat mediated antigen retrieval was conducted for 20mins with DISCOVERY cell conditioning solution (CC1) 100°C, pH8.5. ab115730 anti-Glucose Transporter GLUT1 was incubated at 37°C for 16mins.

Sections were counterstained is with Hematoxylin II. Image inset shows absence of staining in secondary antibody only control.

Customers are encouraged to optimise antigen retrieval conditions, antibody concentration, incubation times and temperature for best results in their own IHC assay workflow (automated and manual)




Zhu, Y. et al PLoS Pathog. 2016 May 17;12(5):e1005648. doi: 10.1371/journal.ppat.1005648. eCollection 2016 May
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## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

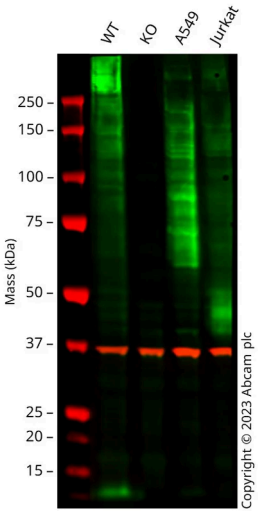
Glucose Transporter GLUT1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Glucose Transporter GLUT1 antibody

**GLUT1 and GLUT3 are downregulated in KSHV-infected cells in human KS tumors**
Representative illustration of dual immunofluorescence detection of LANA and GLUT1 or in a normal human skin section and a Karposi Sarcoma (KS) tumor section. Tissues were fixed with

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paraformaldehyhde and paraffin-embedded.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab115730).




## Western blot - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

Glucose Transporter GLUT1 Western blot staining using rabbit Anti-Glucose Transporter GLUT1 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab115730).
Western blot: Anti-Glucose Transporter GLUT1 antibody [EPR3915] staining at 1/100000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] (ab8245) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab115730 was shown to bind specifically to Glucose Transporter GLUT1. A band was observed at 50-300 kDa in wild-type HepG2 cell lysates with no signal observed at this size in SLC2A1 knockout cell line ab280797 (knockout cell lysate ab284224). To generate this image, wild-type and SLC2A1 knockout HepG2 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3% milk in TBS-0.1% Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4°C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.

All lanes:
Western blot - Anti-Glucose Transporter GLUT1 antibody [EPR3915] (ab115730) at 1/100000 dilution

Lane 1:
Wild-type HepG2 cell lysate at 20 µg

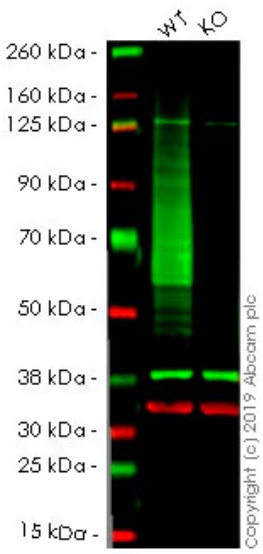
Lane 2:
LC2A1 knockout HepG2 cell lysate at 20 µg

Lane 3:
A549 cell lysate at 20 µg

Lane 4:
Jurkat cell lysate at 20 µg

Performed under reducing conditions.

Observed band size: 50-300 kDa




## Western blot - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

Glucose Transporter GLUT1 Western blot staining using rabbit Anti-Glucose Transporter GLUT1 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab115730).
**Lanes 1 - 2:** Merged signal (red and green). Green - ab196357 observed at 54 kDa. Red - loading control, ab8245, observed at 37 kDa.

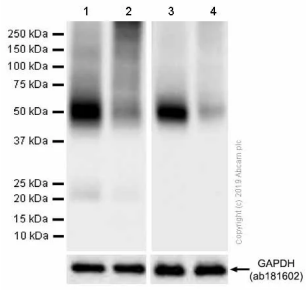
ab196357 was shown to recognize in wild-type A549 cells as signal was lost at the expected MW in SLC2A1 knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and SLC2A1 knockout samples were subjected to SDS-PAGE. ab196357 and ab8245 (Mouse anti-GAPDH 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.

All lanes:
Western blot - Anti-Glucose Transporter GLUT1 antibody [EPR3915] (ab115730) at 1 µg/mL

Lane 1:
Wild-type A549 whole cell lysate at 20 µg

Lane 2:
Western blot - Human SLC2A1 (Glucose Transporter GLUT1) knockout A549 cell lysate (ab261678) at 20 µg

Predicted band size: 54 kDa




## Western blot - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

Glucose Transporter GLUT1 Western blot staining using rabbit Anti-Glucose Transporter GLUT1 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab115730). **Exposure time**
**Lane 1 to 2:** 10 seconds
**Lane 3 to 4:** 30 seconds

We recommend not to boil the samples after lysis to get desired WB bands.

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

All lanes:
Western blot - Anti-Glucose Transporter GLUT1 antibody [EPR3915] (ab115730) at 1/50000 dilution

Lane 1:
HT-29 (Human colorectal adenocarcinoma epithelial cell) whole cell lysates unboiled at 20 µg

Lane 2:
HT-29 (Human colorectal adenocarcinoma epithelial cell) whole cell lysates boiled at 20 µg

Lane 3:
3T3-L1 (Mouse embryonic fibroblast) whole cell lysates unboiled at 20 µg

Lane 4:

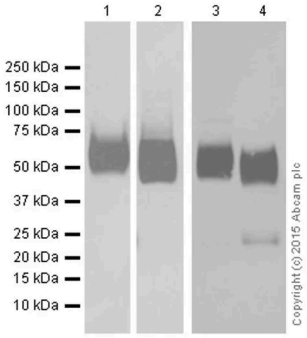
3T3-L1 (Mouse embryonic fibroblast) whole cell lysates boiled at 20 µg

Secondary

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

Predicted band size: 54 kDa

Observed band size: 40-60 kDa




## Western blot - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

Glucose Transporter GLUT1 Western blot staining using rabbit Anti-Glucose Transporter GLUT1 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab115730).
Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST

All lanes:
Western blot - Anti-Glucose Transporter GLUT1 antibody [EPR3915] (ab115730) at 1/1000000 dilution

Lane 1:
HepG2 whole cell lysate at 10 µg

Lane 2:
Human fetal liver lysate at 10 µg

Lane 3:
HT-29 whole cell lysate at 10 µg

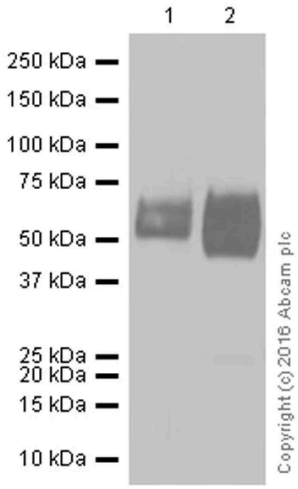
Lane 4:
SW480 whole cell lysate at 10 µg

Secondary

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

Predicted band size: 54 kDa

Observed band size: 40-60 kDa




## Western blot - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

Glucose Transporter GLUT1 Western blot staining using rabbit Anti-Glucose Transporter GLUT1 antibody

Blocking buffer and concentration: 5% NFDM/TBST
Diluting buffer and concentration: 5% NFDM/TBST

All lanes:
Western blot - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

Lane 1:
HepG2 (human hepatocellular carcinoma) whole cell lysate at 15 µg

Lane 2:
HT-29 (Human colorectal adenocarcinoma epithelial cell) whole cell lysate at 15 µg

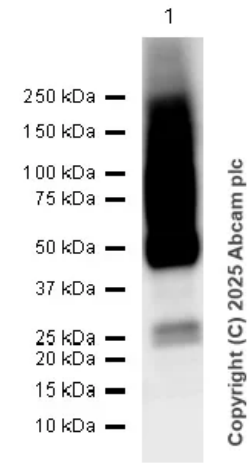
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051)

Predicted band size: 54 kDa

Observed band size: 40-60 kDa

Exposure time: 3min




## Western blot - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

Glucose Transporter GLUT1 Western blot staining of Rat placenta tissue lysate using rabbit Anti-Glucose Transporter GLUT1 antibody

This data was developed using ab115730, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: 5% NFDM/TBST.

All lanes:
Western blot - Anti-Glucose Transporter GLUT1 antibody [EPR3915] (ab115730) at 1/1000 dilution

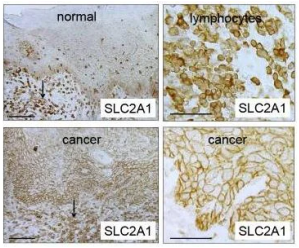
All lanes:
Rat placenta tissue lysate at 20 µg

Secondary

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

Observed band size: 40-60 kDa

Exposure time: 15s

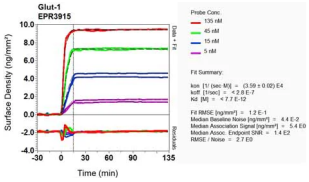



Khaom, R. et al PLoS One. 2016 Aug 11;11(8):e0161163. doi: 10.1371/journal.pone.0161163. eCollection 2016 Reproduced under the Creative Commons license http://creativecommons.org/licenses/by/4.0/

## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

Immunohistochemical expression of Glut1 in normal tongue epithelium and tongue cancer. Expression was greatest in lymphocytes (arrows in left upper and lower panels). In the normal oral epithelium, Glut1 was weakly expressed in the basal and spinous cells (left upper panel). In OSCC, Glut1 was upregulated, showing a level of expression comparable with lymphocytes (left and right lower panels). Scale bar, 100 µm.
Note: Glut1 = SLC2A (alternative names for the same target).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab115730).




## OI-RD Scanning - Anti-Glucose Transporter GLUT1 antibody [EPR3915] - Low endotoxin, Azide free (ab196357)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.