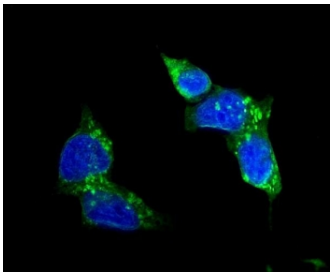
SLC2A1 Antibody for IF / GLUT1 Glucose Transporter (R31941)

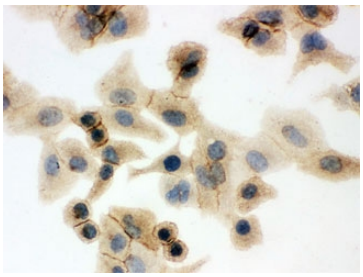
Catalog No.	Formulation	Size
R31941	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

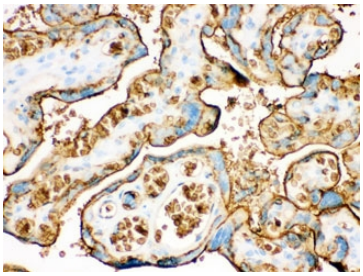
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
UniProt	P11166
Localization	Cytoplasmic, membrane
Applications	Western blot: 0.1-0.5ug/ml Immunocytochemistry: 0.5-1ug/ml Immunohistochemistry (Frozen): 0.5-1ug/ml Immunohistochemistry (FFPE): 0.5-1ug/ml Immunofluorescence (FFPE): 2-4ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This SLC2A1 antibody is available for research use only.



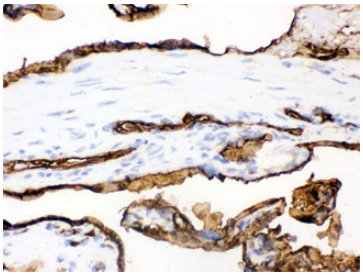
SLC2A1 Antibody for IF staining in human placenta tissue. FFPE human placental section shows green fluorescent staining corresponding to GLUT1 (SLC2A1) localization outlining cell membranes and cytoplasmic vesicular structures, consistent with plasma membrane distribution of the glucose transporter. The fluorescent signal highlights metabolically active placental cells where GLUT1 mediates glucose transport. Nuclei are counterstained with DAPI (blue). Heat-induced antigen retrieval was performed by boiling paraffin sections in pH 6, 10 mM citrate buffer for 20 minutes followed by cooling prior to antibody incubation. Signal was detected using an immunofluorescence method and visualized by fluorescence microscopy.



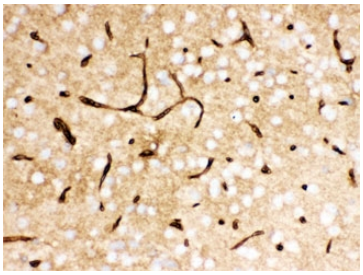
ICC testing of human A549 cells with SLC2A1 antibody.



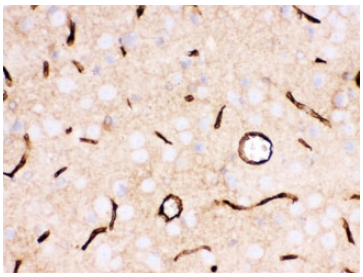
IHC testing of FFPE human placenta with SLC2A1 Antibody for IF. HIER: Boil the paraffin sections in pH 6, 10mM citrate buffer for 20 minutes and allow to cool prior to staining.



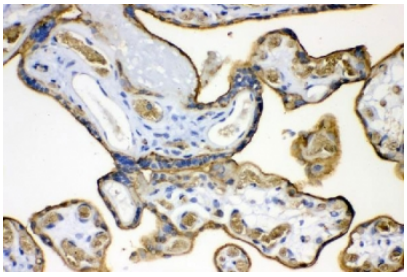
IHC testing of frozen human placenta with SLC2A1 antibody.



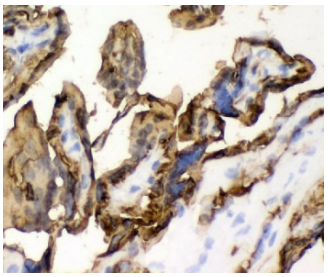
IHC testing of FFPE mouse brain with SLC2A1 antibody. HIER: Boil the paraffin sections in pH 6, 10mM citrate buffer for 20 minutes and allow to cool prior to staining.



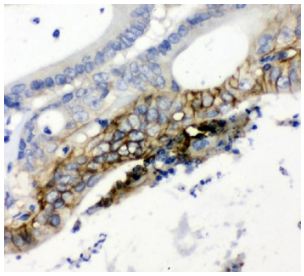
IHC testing of FFPE rat brain with SLC2A1 antibody. HIER: Boil the paraffin sections in pH 6, 10mM citrate buffer for 20 minutes and allow to cool prior to staining.



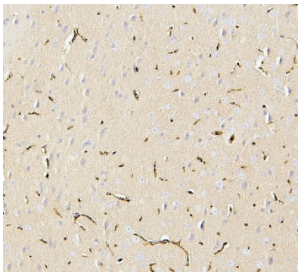
IHC testing of FFPE human placenta with SLC2A1 antibody. HIER: Boil the paraffin sections in pH 8 EDTA for 20 minutes and allow to cool prior to staining.



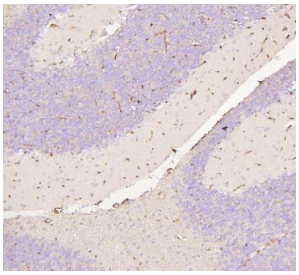
IHC testing of FFPE human placenta with SLC2A1 antibody. HIER: Boil the paraffin sections in pH 8 EDTA for 20 minutes and allow to cool prior to staining.



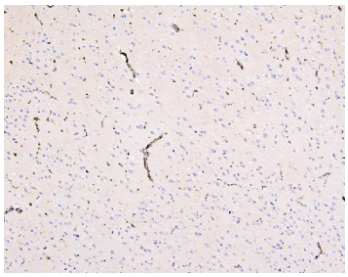
IHC testing of FFPE human breast cancer with SLC2A1 antibody. HIER: Boil the paraffin sections in pH 8 EDTA for 20 minutes and allow to cool prior to staining.



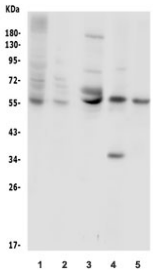
IHC testing of FFPE mouse brain with SLC2A1 antibody. HIER: Boil the paraffin sections in pH 8 EDTA for 20 minutes and allow to cool prior to staining.



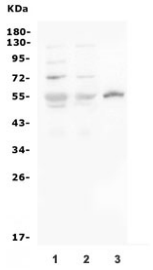
IHC testing of FFPE rat brain with SLC2A1 antibody. HIER: Boil the paraffin sections in pH 8 EDTA for 20 minutes and allow to cool prior to staining.



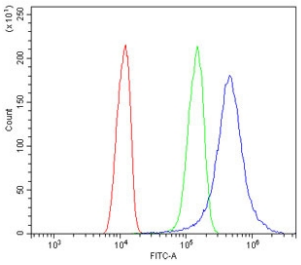
IHC testing of FFPE rat brain with SLC2A1 antibody. HIER: Boil the paraffin sections in pH 8 EDTA for 20 minutes and allow to cool prior to staining.



Western blot testing of 1) human placenta, 2) human A549, 3) mouse brain, 4) rat PC-12 and 5) mouse NIH 3T3 lysate wtih SLC2A1 antibody. Predicted molecular weight ~55 kDa.



Western blot testing of 1) rat brain, 2) mouse brain and 3) mouse NIH 3T3 lysate wtih SLC2A1 antibody. Predicted molecular weight ~55 kDa.



Flow cytometry testing of human A431 cells with SLC2A1 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= SLC2A1 antibody.

Description

Glucose transporter 1 (SLC2A1), widely known as GLUT1, is a facilitative glucose transporter responsible for basal glucose uptake in many cell types and plays a central role in cellular energy metabolism. SLC2A1 Antibody for IF enables immunofluorescence detection of GLUT1 and supports fluorescence microscopy analysis of this membrane-associated transporter in cultured cells and tissue sections. In immunofluorescence staining experiments, GLUT1 commonly appears as strong plasma membrane-associated fluorescence outlining individual cells, reflecting localization of the transporter within the cell membrane where glucose uptake occurs. Because GLUT1 functions at the cell surface, immunofluorescence microscopy frequently reveals clear fluorescent membrane labeling that highlights cell borders and enables visualization of glucose transporter distribution within cellular populations.

Immunofluorescence analysis of SLC2A1 is widely used to study glucose transport regulation, metabolic signaling, and membrane transporter trafficking. Using fluorescence microscopy, GLUT1 staining typically produces a combination of membrane-associated fluorescent signal and punctate cytoplasmic fluorescence representing intracellular transporter pools. These vesicular fluorescent structures correspond to transporter trafficking pathways involved in GLUT1 recycling between intracellular vesicles and the plasma membrane. A SLC2A1 Antibody for IF therefore allows researchers to visualize both cell surface GLUT1 localization and intracellular transporter trafficking events.

Confocal immunofluorescence microscopy provides high-resolution visualization of GLUT1 distribution within cells and enables detailed examination of plasma membrane transporter organization. In confocal fluorescence imaging experiments, GLUT1 immunofluorescence often appears as continuous or semi-continuous membrane fluorescence outlining individual cells, together with vesicular fluorescent structures located within the cytoplasm. These imaging patterns reflect the dynamic trafficking of GLUT1 transporters between intracellular vesicles and the plasma membrane during glucose transport regulation.

Immunofluorescence staining of GLUT1 can also be incorporated into co-localization studies with plasma membrane markers or vesicular trafficking proteins to investigate transporter localization and intracellular transport pathways. Because GLUT1 expression is frequently elevated in metabolically active cells and many tumor cell types, fluorescent detection of SLC2A1 is widely used to examine metabolic reprogramming and glucose uptake regulation. Fluorescent microscopy therefore provides an effective approach for visualizing GLUT1 localization and studying the spatial organization of glucose transport systems within cells.

SLC2A1 Antibody for IF supports immunofluorescence-based visualization of GLUT1 using fluorescence microscopy and enables detailed analysis of plasma membrane localization, intracellular vesicle trafficking, and metabolic transporter regulation. Immunofluorescence imaging using a GLUT1 antibody reveals characteristic membrane-associated

fluorescent staining outlining individual cells together with vesicular cytoplasmic signal, providing a powerful tool for studying glucose transporter distribution, cellular metabolism, and membrane transport biology.

Application Notes

Optimal dilution of the SLC2A1 Antibody for IF should be determined by the researcher.

Immunogen

Amino acids 92-492 of human SLC2A1 were used as the immunogen for the SLC2A1 Antibody for IF.

Storage

After reconstitution, the SLC2A1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

GLUT1 antibody, Glucose transporter 1 antibody, GLUT-1 antibody, Erythrocyte glucose transporter antibody

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