abcam

Product datasheet

Anti-Glucose Transporter GLUT1 antibody ab15309

★★★★★ 11 Abreviews 48 References 5 Images

Overview

Product name	Anti-Glucose Transporter GLUT1 antibody
Description	Rabbit polyclonal to Glucose Transporter GLUT1
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt, IHC-Fr, ICC/IF, WB, IHC-P
Species reactivity	**Reacts with:** Rat, Human
Immunogen	Synthetic peptide (the amino acid sequence is considered to be commercially sensitive).
Positive control	HepG2 cells, esophagous and breast carcinoma.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Preservative: 0.1% Sodium Azide Constituents: 1% BSA, 10mM PBS, pH 7.4
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab15309** in the following tested applications.

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

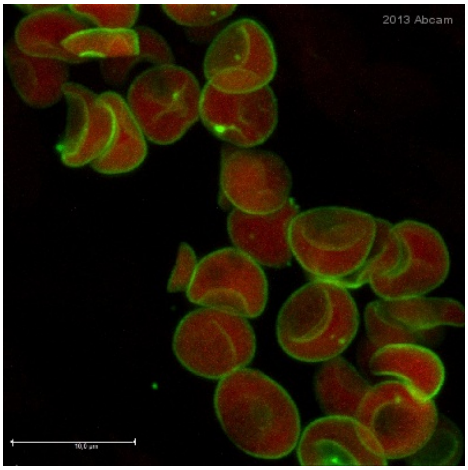
Application	Abreviews	Notes
Flow Cyt		Use at an assay dependent concentration. PubMed: 25269858 ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.
IHC-Fr	★★★★★	Use at an assay dependent concentration.
ICC/IF	★★★★★	Use at an assay dependent concentration. See Abreview.

Application	Abreviews	Notes
WB	★★★★☆	Use a concentration of 0.5 µg/ml. Predicted molecular weight: 55 kDa. The band may look broad like that for most membrane glycoproteins. A reviewer of another antibody against Glut1, ab652, suggests "do not boil sample before loading as this causes smearing of GLUT-1 bands".
IHC-P	★★★★★	1/200.

Target

Function	Facilitative glucose transporter. This isoform may be responsible for constitutive or basal glucose uptake. Has a very broad substrate specificity; can transport a wide range of aldoses including both pentoses and hexoses.
Tissue specificity	Expressed at variable levels in many human tissues.
Involvement in disease	Defects in SLC2A1 are the cause of glucose transporter type 1 deficiency syndrome (GLUT1DS) [MIM:606777]; also known as blood-brain barrier glucose transport defect. This disease causes a defect in glucose transport across the blood-brain barrier. It is characterized by infantile seizures, delayed development, and acquired microcephaly. Defects in SLC2A1 are the cause of dystonia type 18 (DYT18) [MIM:612126]. DYT18 is an exercise-induced paroxysmal dystonia/dyskinesia. Dystonia is defined by the presence of sustained involuntary muscle contraction, often leading to abnormal postures. DYT18 is characterized by attacks of involuntary movements triggered by certain stimuli such as sudden movement or prolonged exercise. In some patients involuntary exertion-induced dystonic, choreoathetotic, and ballistic movements may be associated with macrocytic hemolytic anemia.
Sequence similarities	Belongs to the major facilitator superfamily. Sugar transporter (TC 2.A.1.1) family. Glucose transporter subfamily.
Post-translational modifications	Phosphorylated upon DNA damage, probably by ATM or ATR.
Cellular localization	Cell membrane. Melanosome. Localizes primarily at the cell surface (By similarity). Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

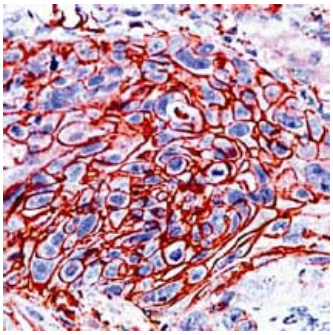
Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glucose Transporter GLUT1 antibody (ab15309)

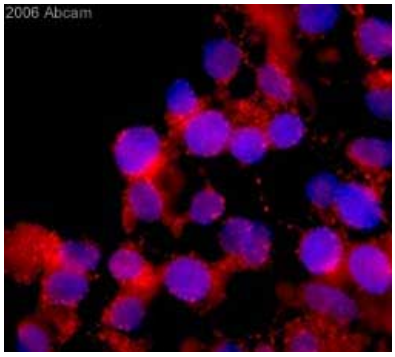
This image is courtesy of an Abreview submitted by Heiko Locher

ab15309 staining Glucose Transporter GLUT1 (green) in Human red blood cells tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 1% BSA for 30 minutes at room temperature; antigen retrieval was by heat mediation in a citrate buffer, pH 6.0. Samples were incubated with primary antibody (1/500 in PBS-T + 1% PBS) for 12 hours. An Alexa Fluor® 488-conjugated Donkey anti-rabbit IgG polyclonal (1/500) was used as the secondary antibody. Red - autofluorescence of erythrocytes.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glucose Transporter GLUT1 antibody (ab15309)

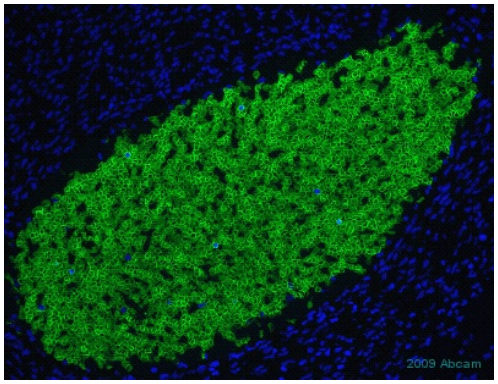
ab15309 staining Glucose Transporter GLUT1 in human esophagous by Immunohistochemistry (FFPE-sections).



Immunocytochemistry/ Immunofluorescence - Anti-Glucose Transporter GLUT1 antibody (ab15309)

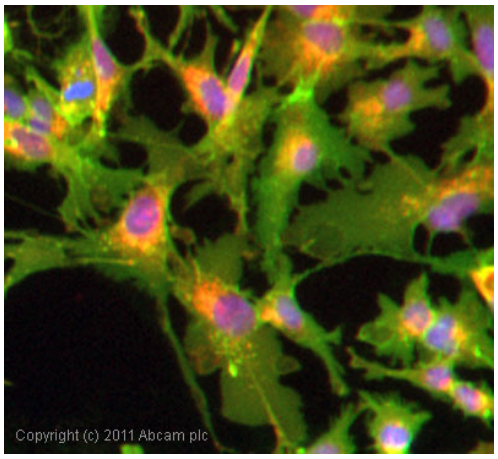
ab15309 at a 1/100 dilution staining rat cells (neural stem cells from adult subventricular zone) by Immunocytochemistry/Immunofluorescence. The cells were incubated with the antibody for 18 hours and then bound antibody was detected using a Cy3 conjugated Goat anti-rabbit IgG (H + L).

This image is courtesy of an Abreview submitted by **Martin Maurer.**



Immunohistochemistry (Frozen sections) - Anti-Glucose Transporter GLUT1 antibody (ab15309)
This image is courtesy of an anonymous Abreview

ab15309 at 1/300 dilution staining GLUT1 in human fetal heart by immunohistochemistry (frozen sections). Sections were paraformaldehyde fixed, permeabilized in saponin 0.1% in PBS prior to blocking in 10% serum for 45 minutes at 37°C and then incubated with ab15309 for 1 hour at 37°C. Alexa fluor® 488 goat polyclonal to rabbit Ig, diluted 1/600, was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-Glucose Transporter GLUT1 antibody (ab15309)

ICC/IF image of ab15309 stained HepG2 cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab15309, 1µg/ml) overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti-rabbit IgG - H&L, pre-adsorbed (ab96899) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

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