


Anti-Glucose Transporter GLUT1 antibody ab14683

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概述

产品名称	Anti-Glucose Transporter GLUT1抗体
描述	兔多克隆抗体to Glucose Transporter GLUT1
宿主	Rabbit
经测试应用	适用于: IHC-P, ICC/IF, WB
种属反应性	与反应: Human 预测可用于: Horse, Chicken, Cat, Pig, Chimpanzee, Monkey, Baboon 
免疫原	Synthetic peptide corresponding to Rat Glucose Transporter GLUT1 aa 481-492 (C terminal) (Cysteine residue). Sequence: [C]GLFHPLGADSQV

Database link: [P11167](#)

 [Run BLAST with](#)

 [Run BLAST with](#)

常规说明

The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

性能

形式	Liquid
存放说明	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
纯度	Immunogen affinity purified
纯化说明	Purified antibody was isolated from immobilized antigen sepharose affinity column.
克隆	多克隆
同种型	IgG

应用

The Abpromise guarantee **Abpromise™**承诺保证使用ab14683于以下的经测试应用

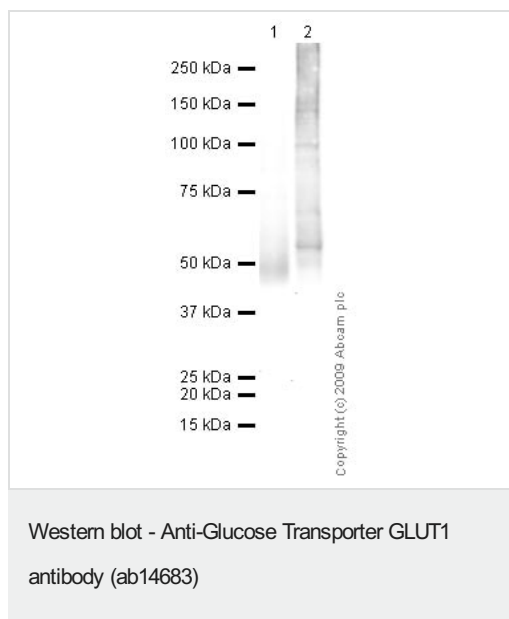
“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
ICC/IF		1/200.
WB		1/2500. Detects a band of approximately 50 kDa (predicted molecular weight: 55 kDa). We suggest that samples should not be heated or frozen.

靶标

功能	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.
组织特异性	Expressed at variable levels in many human tissues.
疾病相关	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.
序列相似性	Belongs to the major facilitator superfamily. Sugar transporter (TC 2.A.1.1) family. Glucose transporter subfamily.
翻译后修饰	Phosphorylated upon DNA damage, probably by ATM or ATR.
细胞定位	Cell membrane. Melanosome. Localizes primarily at the cell surface (By similarity). Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

图片



All lanes : Anti-Glucose Transporter GLUT1 antibody (ab14683) at 1/2500 dilution

Lane 1 : Human placenta tissue lysate - total protein ([ab29745](#))

Lane 2 : SW480 (Human colon adenocarcinoma cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

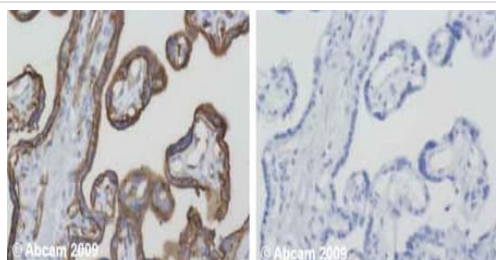
Secondary

All lanes : Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Predicted band size: 55 kDa

Observed band size: 55 kDa

This antibody labels Glut 1 protein as a smear due to large amount of glycosylation on Glut 1 transporter. We observed that boiling and freezing the Glut 1 samples resulted in aggregated form of the protein and gives a smear form high 100kDa range to 45kDa with significant reduction in Glut 1 (44-47kDa) band. We suggest that samples should not be heated or frozen. Following extraction in lysis buffer, the proteins are then dissolved in SDS-PAGE sample buffer 2X and reduced in presence of 2.5-5% BME. All samples at this time will be heated 70-80°C for 3 minutes and aliquot and stored frozen till it is time for analysis. Just before analyses the samples much be thawed at room temp or at 37°C to dissolve any precipitated SDS in the sample. The remaining sample must not be frozen again, this freeze and next thaw cycle will make aggregate in some samples.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glucose Transporter GLUT1 antibody (ab14683)

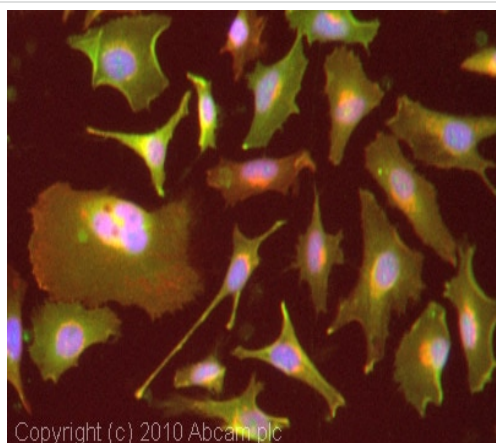
Human normal placenta. Staining is observed at the cell surface.

Left panel: Primary antibody at 2 ug/ml.

Right panel: Isotype control.

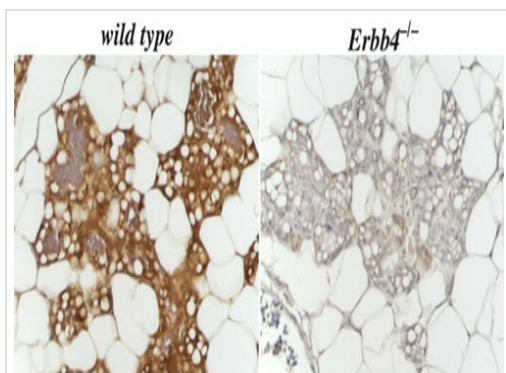
Sections were stained using an automated system DAKO Autostainer Plus, at room temperature: sections were rehydrated and antigen retrieved with the Dako 3 in 1 AR buffers citrate pH 6.1 in a DAKO PT Link. Slides were peroxidase blocked in 3% H₂O₂ in methanol for 10 minutes. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 minutes and detected with Dako envision flex amplification kit for rabbit for 30 minutes. Colorimetric detection was completed with Diaminobenzidine for 5 minutes. Slides were counterstained with haematoxylin and coverslipped under DePeX.

Please note that for manual staining we recommend to optimize the primary antibody concentration and incubation time (overnight incubation), and amplification may be required.



Immunocytochemistry/ Immunofluorescence - Anti-Glucose Transporter GLUT1 antibody (ab14683)

ICC/IF image of ab14683 stained HeLa (Human epithelial cell line from cervix adenocarcinoma) cells. The cells were 4% formaldehyde fixed (10 minutes) and then incubated in 1% BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1 hour to permeabilize the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab14683, 5 µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor[®] 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1 hour. Alexa Fluor[®] 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1 hour. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43 µM.



Immunohistochemical analysis of mammary glands taken from wild-type or *Erbb4*^{-/-} lactating mice, staining Glucose Transporter GLUT1 with ab14683.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glucose Transporter GLUT1 antibody (ab14683)

Image from Paatero I et al., J Biol Chem. 2012 Mar 23;287(13):9659-71. Epub 2012 Feb 3. Fig 1.; doi: 10.1074/jbc.M111.299537; March 23, 2012 The Journal of Biological Chemistry, 287, 9659-9671.

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