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Anti-SLC2A1 Antibody
Catalog # ABO10577

Specification

Anti-SLC2A1 Antibody - Product Information

Application	**WB**
Primary Accession	P11166
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Solute carrier family 2, facilitated glucose transporter member 1(SLC2A1) detection. Tested with WB in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-SLC2A1 Antibody - Additional Information

Gene ID 6513

Other Names
Solute carrier family 2, facilitated glucose transporter member 1, Glucose transporter type 1, erythrocyte/brain, GLUT-1, HepG2 glucose transporter, SLC2A1, GLUT1

Calculated MW
54084 MW KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse

Subcellular Localization
Cell membrane; Multi-pass membrane protein. Melanosome. Localizes primarily at the cell surface. Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

Tissue Specificity
Detected in erythrocytes (at protein level). Expressed at variable levels in many human tissues. .

Protein Name
Solute carrier family 2, facilitated glucose transporter member 1

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human SLC2A1(477-492aa KTPEELFHPLGADSQV), identical to the related mouse and rat sequences.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Sequence Similarities
Belongs to the major facilitator superfamily. Sugar transporter (TC 2.A.1.1) family. Glucose transporter subfamily.

Anti-SLC2A1 Antibody - Protein Information

Name SLC2A1 (HGNC:11005)

Function
Facilitative glucose transporter, which is responsible for constitutive or basal glucose uptake (PubMed:18245775, PubMed:19449892, PubMed:25982116, PubMed:27078104, PubMed:10227690). 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).

Cellular Location
Cell membrane; Multi-pass membrane protein. Melanosome. Photoreceptor inner segment {ECO:0000250|UniProtKB:P17809}. Note=Localizes primarily at the cell surface (PubMed:18245775, PubMed:19449892, PubMed:23219802, PubMed:25982116, PubMed:24847886). Identified by mass spectrometry in melanosome fractions from stage I to stage IV (PubMed:17081065)

Tissue Location
Detected in erythrocytes (at protein level). Expressed at variable levels in many human tissues

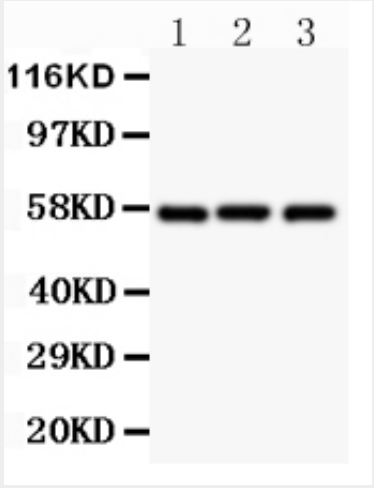
Anti-SLC2A1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot

- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-SLC2A1 Antibody - Images



Anti-SLC2A1 antibody, ABO10577, Western blottingAll lanes: Anti SLC2A1(ABO10577) at 0.5ug/mlLane 1: Rat Liver Tissue Lysate at 50ugLane 2: SW620 Whole Cell Lysate at 40ugLane 3: 293T Whole Cell Lysate at 40ugPredicted bind size: 57KDObserved bind size: 57KD

Anti-SLC2A1 Antibody - Background

GLUT1, also known as SLC2A1, is a major glucose transporter in the mammalian blood-brain barrier whose gene is mapped to 1p35-p31.3 and contains 10 exons. It is present at high levels in primate erythrocytes and brain endothelial cells. Not only can transport dehydroascorbic acid(the oxidized form of vitamin C) into the brain1, GLUT1 is also likely to contribute to HTLV-associated disorders through interacting with HTLV envelope glycoproteins. Functionally, GLUT1 deficiency causes a decrease in embryonic glucose uptake and apoptosis, which may be involved in diabetic embryopathy, by contrast, an increased expression of GLUT1 in some malignant tumors may suggest a role for glucose-derivative tracers to detect in vivo thyroid cancer metastases by positron-emission tomography scanning.