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antibody and ELISA experts

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Anti-SLC2A1 Antibody Picoband™ (monoclonal, 10C10)

Catalog Number: M00163-1

About SLC2A1

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 brain, 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.

Overview

Product Name	Anti-SLC2A1 Antibody Picoband™ (monoclonal, 10C10)
Reactive Species	Human
Description	Boster Bio Anti-SLC2A1 Antibody Picoband™ (monoclonal, 10C10) catalog # M00163-1. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human.
Application	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Monoclonal 10C10
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Mouse
Uniprot ID	P11166

Technical Details

Immunogen	E.coli-derived human SLC2A1 recombinant protein (Position: R92-V492). Human SLC2A1 shares 98% and 98.3% amino acid (aa) sequence identity with mouse and rat SLC2A1, respectively.
Predicted Reactive Species	Hepatitis Virus
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG1
Form	Lyophilized

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Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml Immunocytochemistry/Immunofluorescence, 5ug/ml Flow Cytometry, 1-3ug/1x10^6 cells

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Anti-SLC2A1 Antibody Picoband™ (monoclonal, 10C10) (M00163-1) Images

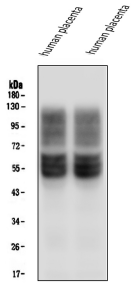

Figure 1. Western blot analysis of SLC2A1 using anti-SLC2A1 antibody (M00163-1).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human placenta tissue lysates,
Lane 2: human placenta tissue lysates.
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-SLC2A1 antigen affinity purified monoclonal antibody (Catalog # M00163-1) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for SLC2A1 at approximately 55KD. The expected band size for SLC2A1 is at 55KD.

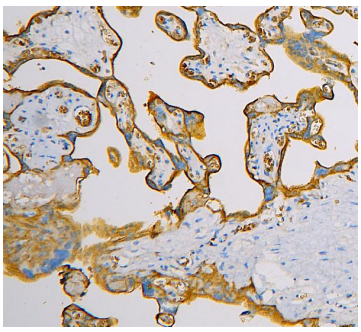

Figure 2. IHC analysis of SLC2A1 using anti-SLC2A1 antibody (M00163-1).
SLC2A1 was detected in paraffin-embedded section of human placenta tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-SLC2A1 Antibody (M00163-1) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

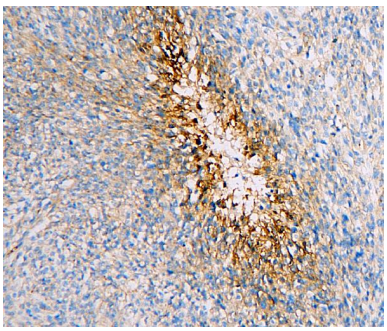

Figure 3. IHC analysis of SLC2A1 using anti-SLC2A1 antibody (M00163-1).
SLC2A1 was detected in paraffin-embedded section of human renal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-SLC2A1 Antibody (M00163-1) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

Figure 4. IF analysis of SLC2A1 using anti-SLC2A1 antibody (M00163-1).
SLC2A1 was detected in immunocytochemical section of

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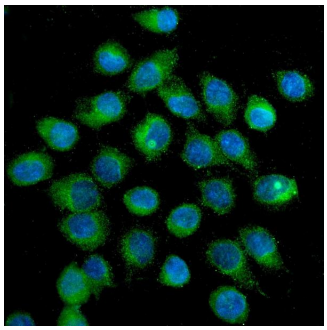

SiHa cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL mouse anti-SLC2A1 Antibody (M00163-1) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

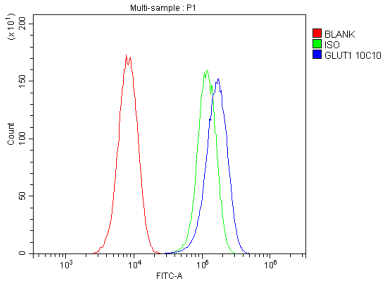

Figure 5. Flow Cytometry analysis of U20S cells using anti-SLC2A1 antibody (M00163-1).
Overlay histogram showing U20S cells stained with M00163-1 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-SLC2A1 Antibody (M00163-1, 1ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

3 Publications Citing This Product

1. PubMed ID: 26600164, Co-Inhibition of GLUT-1 Expression and the PI3K/Akt Signaling Pathway to Enhance the Radiosensitivity of Laryngeal Carcinoma Xenografts?In Vivo

2. PubMed ID: 25120770, Xu Yy, Wu Tt, Zhou Sh, Bao Yy, Wang Qy, Fan J, Huang Yp. Int J Clin Exp Pathol. 2014 Jun 15;7(7):3938-47. Ecollection 2014. Apigenin Suppresses Glut-1 And P-Akt Expression To Enhance The Chemosensitivity To Cisplatin Of Laryngeal Carcinoma Hep-2 C...

3. PubMed ID: 26300442, Apigenin inhibits the proliferation of adenoid cystic carcinoma via suppression of glucose transporter-1

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