

Product Specification Sheet

Glucose Transporter 2 (-2) Antibodies

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| Cat. # GT22-P | Human Glut-2 Control/blocking Peptide | SIZE: 100 ug |
| Cat. # GT22-A | Rabbit Anti-Human Glut-2 IgG (affinity pure) | SIZE: 100 ug |
| Cat. # GT22-S | Rabbit Anti-Human Glut-2 (antiserum) | SIZE: 100 ul |

Most mammalian cells transport glucose through a family of membrane proteins known as glucose transporters. Molecular cloning of these glucose transporters has identified a family of closely related genes that encodes at least 7 proteins (**Glut-1-Glut-14**, Mol. Wt. 40-80 kDa) and Sodium glucose co-transporter-1 (SGLT-1, 662 amino acids; ~75 kDa). Individual member of this family have identical predicted secondary structures with 12 transmembrane domains. Both N and c-termini are predicted to be cytoplasmic. Most differences in sequence homology exist within the four hydrophilic domains that may play a role in tissue-specific targeting.

Human Glut-2 (GTR2, 524 aa, chromosome 3q26.1-q26.3, ~60 kDa) belongs to the family of solute carrier family 2, member 2 or Slc2a2 or facilitative glucose transporter. Glut-2 likely mediates the bidirectional transfer of glucose across the plasma membrane of hepatocytes and is responsible for uptake of glucose by the beta cells; May also participate with the Na(+)/glucose cotransporter in the transcellular transport of glucose in the small intestine and kidney. It is a multi-pass membrane protein. Primarily expressed in liver, insulin-producing beta cell, small intestine and kidney. Defects in SLC2A2 are the cause of Fanconi-Bickel syndrome (FBS, a rare, autosomal recessive mode and characterized by hepatorenal glycogen accumulation, and impaired utilization of glucose and galactose. Belongs to the major facilitator superfamily. Sugar transporter (TC 2.A.1.1)

Source of Antigen and Antibodies

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|---------------------|--|
| Antigen | 14-aa peptide from Human glut-2 (gene accession # P11168 Designation (#GT22-P, control peptide) conjugated to KLH |
| Location | ~C-terminus, exoplasmic domain |
| Ab Host/type | Rabbit, Polyclonal Unpurified antiserum (cat #GT22-S) Aff pure IgG (cat # GT22-A) purified over antigen-agarose column |
| 2-ab | # 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control |
| -ve control | # 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control |

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)

100ul solution lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG

100 ug/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -20°C and powder at 4°C or -20°C..

Long-term: at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20°C or below.

Shipping: 4°C for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for antiserum and 1-10 ug/ml for affinity pure IgG using Chemiluminescence technique). (refs 2)

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

Histochemistry: We recommend the use of affinity purified antibody at 2-10 ug/ml. (see refs 2).

Specificity & Cross-reactivity

The human GT22 peptide shows 64% homology with rat Glut-2 and 57% homology with mouse Glut-2. For better detection of mouse/rat Glut-2, we recommend another antibody Cat #GT21-S that is made to peptide sequence derived from mouse/rat Glut-2. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at: www.4adi.com/data/abblock.html).

General References: 1. Fukumoto, H., et al (1988) Proc. Natl. Acad. Sci. 85, 5434-5438; Thorens, B, et al (1988) Cell, 55, 281-290; 2. Asano, T et al (1989) Nucleic Acid Res. 17, 6386; Suzue, K., et al (1989) Nucleic Acid Res. 17, 10099.

(2) Citations of ADI's Antibodies for NRAMP2

Please search for Glut-2 and consult the publications for additional guidance on antibody concn, and other technique.
www.4adi.com/serach.php

*This product is for In vitro research use only.

Related material available from ADI

Antibodies for Glut 1-13 & SGLT-1/2
GT22-S-A-P 70501A

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