

Product Specification Sheet

Glucose Transporter 6 (Glut-6) Antibodies

Cat. # GT62-P	Human Glut-6 Control/blocking Peptide	SIZE: 100 ug
Cat. # GT62-A	Rabbit Anti-Human Glut-6 IgG (aff pure)	SIZE: 100 ug
Cat. # GT62-S	Rabbit Anti-Human Glut-6 (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 to Glut-13**, 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. Glut isoform differ in their tissue expression, substrate specificity and kinetic characteristics.

Glut-6/SLC2A6, originally described as glut-9 has been reassigned as Glut-6. Glut-6 (human 507 aa; ~ 48 kDa; chromosome 9q34) is most closely related to Glut-8 (~45% homology). It is highly expressed in brain, spleen, and peripheral leukocytes.

FUNCTION: Facilitative glucose transporter; binds cytochalasin B with low affinity.

SUBCELLULAR LOCATION: Cell membrane; Multi-pass membrane protein (By similarity). Note=The dileucine internalization motif is critical for intracellular sequestration (By similarity).

TISSUE SPECIFICITY: Highly expressed in brain, spleen and peripheral blood leukocytes.

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

CAUTION: Has been described as GLUT9 in literature, but this gene name has already been used for SLC2A9.

Protein name Solute carrier family 2, facilitated glucose transporter member 6

Synonyms Glucose transporter type 6, GLUT-6, Glucose transporter type 9, GLUT-9, GLUT9

Gene name SLC2A6

Source of Antigen and Antibodies

Antigen	16-aa peptide from Human Glut-6 (protein accession #Q9UGQ3, refs 1; Designation (GT62-P, control peptide); Epitope location~ C-terminal, Cytoplasmic domain
Ab Host/type	Rabbit, Polyclonal Unpurified antiserum (cat #GT62-S) Aff pure IgG (cat # GT62-A)
2-ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control IgG	# 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 -20OC and powder at 4oC or -20oC..

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

Stability: 6-12 months at -20oC or below.

Shipping: 4oC 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). Glut-6 is ~48 kDa.

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: not tested. We recommend the use of affinity purified antibody at 2-10 ug/ml.

Specificity & Cross-reactivity

Human GT62-P is 93% conserved in chimp, 75% in xenopus (frog) glut-6 proteins. Glut-6 sequences for mouse and rat are not available. It has no significant sequence homology with other gluts. Antibody cross-reactivity in various species is not known. 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 .

General References: 1. Doege et al (2000) Biochem. J. 350, 771-776.

Citations of ADI's antibodies for Glucose transporters (see updated list at: www.4adi.com/flr/glutsflr.html)

*This product is for In vitro research use only.

Related material available from ADI

Antibodies for Glut 1-13 & SGLT-1/2

GT62-S-A-P 70911A