

Product Specification Sheet

**Glucose Transporter 5 (Glut-5) Antibodies**

<input type="checkbox"/> Cat. # GT52-P	Human Glut-5 Control/blocking Peptide	<b>SIZE:</b> 100 ug
<input type="checkbox"/> Cat. # GT52-A	Rabbit Anti-Human Glut-5 IgG (affinity pure)	<b>SIZE:</b> 100 ug
<input type="checkbox"/> Cat. # GT52-S	Rabbit Anti-Human Glut-5 (antiserum)	<b>SIZE:</b> 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 isoforms differ in their tissue expression, substrate specificity and kinetic characteristics.

**Glut-5** (rat 502 aa; transports fructose in intestine and testis).  
**FUNCTION:** Cytochalasin B-sensitive carrier. Seems to function primarily as a fructose transporter.  
**SUBCELLULAR LOCATION:** Multi-pass membrane protein.  
**TISSUE SPECIFICITY:** Expressed in small intestine, and at much lower levels in kidney, skeletal muscle, and adipose tissue.  
**SIMILARITY:** Belongs to the major facilitator superfamily. Sugar transporter (TC 2.A.1.1) family. Glucose transporter subfamily  
**Protein name** Solute carrier family 2, facilitated glucose transporter member 5 ; **Synonyms** Glucose transporter type 5, small intestine GLUT-5, Glut5, Fructose transporter ; **Gene name** Slc2a5

**Source of Antigen and Antibodies**

<b>Antigen</b>	13-aa peptide from Human <b>Glut-5</b> (protein accession #P22372, refs 1); <b>Designation (GT52-P, control peptide)</b> conjugated to KLH; <b>Epitope location</b> ~ C-terminal, Cytoplasmic domain
<b>Ab Host/type</b>	Rabbit, Polyclonal Unpurified antiserum (cat #GT52-S) Aff pure IgG (cat # <b>GT52-A</b> )
<b>2-ab</b>	<b>Goat Anti-rabbit IgG-HRP</b> cat # 20320 (AP, biotin, FITC conjugates also available)
<b>-ve control IgG</b>	<b># 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control</b>

**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 -200C 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). Rat Glut-5 is ~ 60 kDa in rat jejunum membranes (2) that is slightly larger than that reported for human Glut 5 (50-55 kDa) (3). As opposed to human tissues, rat Glut-5 mRNA has not been detected in rat testis, adipose tissues, and skeletal muscle (2, 4). In rat kidney, a protein of about 42 kDa was detected (5).

**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.

**Specificity & Cross-reactivity**

Antibodies for Glut 1-12 & SGLT-1-6

GT52-S-A-P

70911A

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