

Product Specification Sheet

**Glucose Transporter 7 (rGlut-7) Antibodies**

Cat. # GT72-P	Rat Glut-7 Control/blocking Peptide #2	<b>SIZE:</b> 100 ug
Cat. # GT72-A	Rabbit Anti-Rat Glut-7 IgG # 2 (aff pure)	<b>SIZE:</b> 100 ug
Cat. # GT72-S	Rabbit Anti-Rat Glut-7 antiserum #2	<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 isoform differ in their tissue expression, substrate specificity and kinetic characteristics.

**Glut-7 (rat 528-aa)**, expressed in liver and other gluconeogenic tissues, mediates glucose flux across endoplasmic reticulum membrane.

**Source of Antigen and Antibodies**

<b>Antigen</b>	12-aa peptide from rat <b>Glut-7 (protein accession #S24344; refs 1)</b> ; <b>Designation (GT72-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 #GT72-S) Aff pure IgG (cat # <b>GT72-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 40C or -200C..

**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 -200C or below.

**Shipping:** 40C 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).

**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**

Rat GT72 sequence is 63% identical in human Glut-7. However, Glut-7 contains an extra 6 amino acid (KKMKND) at the C-terminal end. This sequence is very similar to the last 6 amino acids of some of the microsomal UDP-glucuronosyltransferase isoenzymes (see refs. 1 and other refs. Cited therein). The KK-K- has been considered motif for the retention of transmembrane proteins (3) and is not found in Gluts 1-5. The crossreactivity of anti-rat GT71 antibody to other proteins with an endoplasmic reticulum motif and species crossreactivity has not been determined. 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. Waddell. I.D., et al (1992) Biochem. J. 286, 173-177 & (1991) Biochem. J. 275, 363-377; 3. Jackson, M.R., et al (1990) EMBO J., 9, 3153-3162.

**Citations of for Glut antibodies** (see updated list at the web site)

Manolescu A 2005 J. Biol. Chem., 280: 42978 - 42983.  
WB IHC

Li Q 2004 Am J Physiol Gastrointest Liver Physiol, 287, G236-G242  
WB, IF

\*This product is for In vitro research use only.

**Related material available from ADI**

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

GT72-S-A-P 70912A

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