ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Glucose Transporter 9 (Glut-9) Antibodies

□ Cat. # GT91-P	Human Glut-9 Control/blocking Peptide	**SIZE**: 100 ug
□ Cat. # GT91-A	Rabbit Anti-Human Glut-9 IgG (affinity pure)	**SIZE**: 100 ug
□ Cat. # GT91-S	Rabbit Anti-Human Glut-9 (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-7**, Mol. Wt. 40-60 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.

Human **Glut-9 (540-aa)** is expressed in spleen, peripheral leucocytes and brain.
FUNCTION: Facilitative glucose transporter (By similarity).
SUBCELLULAR LOCATION: Membrane; Multi-pass membrane protein.
TISSUE SPECIFICITY: Highly expressed in kidney followed by liver; also detected in placenta, lung, blood leukocytes, heart and skeletal muscle.
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 9; Glucose transporter type 9, GLUT-9 ,GLUT9; **Gene name** : SLC2A9

Source of Antigen and Antibodies

Antigen	21-aa peptide from Human **Glut-9 (protein accession #Q9NRM0, refs 1)**; **Designation (GT91-P, control peptide)** conjugated to KLH; **Epitope location**~ C-terminal, Cytoplasmic domain
Ab Host/type	Rabbit, Polyclonal Unpurified antiserum (cat #GT91-S) Aff pure IgG (**cat # GT91-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).

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 GT91-P antigenic peptide sequence is has no significant sequence homology with other gluts. Human GT91-P is 100% conserved in chimp and monkey, 70% in horse, sheep, 70% in rabbit, 55% in cat, and 50% in chicken. Mouse and rat GT9 do not show significant conservation with the GT91-P. Antibody crossreactivity in various species is not established. 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 H et al (2000) Biochem. J. 350, 771-776; Phay JE (2000) Genomics 66, 217-220,

Citations of for Glut-2 (see updated list at the web site)

*This product is for In vitro research use only.

Related material available from ADI

Antibodies for Glut 1-11 & SGLT-1/2
GT91-S-A-P 130318A

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