ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Glucose Transporter 11 (Glut-11) Antibodies

Cat. # GT111-P	Human Glut-11 Control/blocking Peptide	**SIZE**: 100 ug
Cat. # GT111-A	Rabbit Anti-Human Glut-11, IgG (affinity pure)	**SIZE**: 100 ug
Cat. # GT111-S	Rabbit Anti-Human Glut-11, (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-11** (496 aa, chromosome 22q11.2; ~41% identity with Glut-5) is expressed in heart and skeletal muscle. Glut-11 is alternatively spliced to isoforms 2. The long form (GLUT11-L) cDNA uses 13 exons to produce a protein containing 503 amino acids. The short form of GLUT11 (GLUT-11) cDNA is missing exon 2 and produces a protein of 496 amino acids with a 14 amino acid N-terminal difference compared to the long form.

Source of Antigen and Antibodies

Antigen	16-aa peptide from **Human GT111**; (Gene Accession #Q9BYW1) **Designation (GT111-P, control peptide /blocking peptide)** conjugated to KLH; **Epitope location**~ C-terminal, Cytoplasmic domain
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (#**GT111**-S) and IgG, purified over antigen-agarose (Cat # **GT111**-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-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 -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 GT111-P peptide sequence has no significant sequence homology with other gluts. It has not yet been cloned from other species. Since the epitope for GT111-A is at the C-terminus, the antibodies should detect the long and short isoforms (Glut11-AB, or Glut11-C etc) that differs at the N-terminus or other regions. 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 (2001) Biochem J. 359, 443-459.

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

GT111-S-A-P 70912A

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; **Email**: service@4adi.com
☎ (800) 786-5777; (210) 561-9515; **Fax**: (210) 561-9544; **Web Site**: www.4adi.com