ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Glucose Transporter 13 (Glut-13/proton myo-inositol transporter, HMIT) Antibodies

Cat. # GT132-P	Human Glut-13 Control/blocking Peptide	**SIZE**: 100 ug
Cat. # GT132-A	Rabbit Anti-Human Glut-13 IgG (affinity pure)	**SIZE**: 100 ug
Cat. # GT132-S	Rabbit Anti-Human Glut-13 (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 isoforms differ in their tissue expression, substrate specificity and kinetic characteristics. **Glut-13** or proton myo-inositol transporter (**HMIT**; human 629 aa, rat 618 aa, ~75-90 kDa/67 kDa protein) is highly expressed in glial cells and some neurons. Glut-13 transport activity was specific for myo-inositol. Rat HMIT is ~35% identical to rat GlutX1.

Source of Antigen and Antibodies

Antigen	16-aa peptide from **Human GT13 or MYCT** Q96QE2; **Designation (GT132-P, control peptide**) conjugated to KLH
Location	~C-terminus, Cytoplasmic domain
Ab Host/type	Rabbit, Polyclonal, Unpurified antiserum (cat #GT132-S) Aff pure IgG (**cat # GT132-A**) conjugated to KLH
2-ab	**Goat Anti-rabbit IgG-HRP** cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control	**Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control**

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified, undiluted)
100 ul/vial solution lyophilized powder
contains 0.05% sodium 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-13/HMIT is ~75-90 kDa (glycosylated) and ~67 kDa non-glycosylated forms.

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 GT132-P peptide sequence is 100% conserved in rat Glut-13/HMIT. It has not yet been cloned from other species. 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 (see detailed protocol at: www.4adi.com\data\abblock.html).

General References: **1**. Uldry M et al ((2001) EMBO J. 20, 4467-4477.

List of Publications for the products and List of all related items are available at the web site.

*This product is for In vitro research use only.

Related material available from ADI

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

GT132 S-A-P 70911A

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