ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Mouse Monoclonal Anti-Human Glut-2

Cat. # GT23-M Mouse monoclonal anti-human Gllut-2 IgG #3 **SIZE**: 100 ug

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-Glut-14**, 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.

Human Glut-2 (GTR2, 524 aa, chromosome 3q26.1-q26.3, ~60 kda) belongs to the family of solute carrier family 2, member 2 or Slc2a2 or facilitative glucose transporter. Glut-2 likely mediates the bidirectional transfer of glucose across the plasma membrane of hepatocytes and is responsible for uptake of glucose by the beta cells; May also participate with the Na(+)/glucose cotransporter in the transcellular transport of glucose in the small intestine and kidney. It is a multi-pass membrane protein. Primarily expressed in liver, insulin-producing beta cell, small intestine and kidney. Defects in SLC2A2 are the cause of Fanconi-Bickel syndrome (FBS, a rare, autosomal recessive mode and characterized by hepatorenal glycogen accumulation, and impaired utilization of glucose and galactose. Belongs to the major facilitator superfamily. Sugar transporter (TC 2.A.1.1)

Protein name Solute carrier family 2, facilitated glucose transporter member 2; Glucose transporter type 2, liver; GLUT-2 ; Glut-2, Glut2; Gene name : Slc2a2

Source of Antigen and Antibodies

Antigen	Recombinant Human glut-2 protein; epitope location ~ Extracellular
Ab Host/type	Mouse monoclonal, IgG2a, Protein A/G pure (cat #GT23-M)
2-ab	**Goat Anti-mouse IgG-HRP conjugate** Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG
100 ug/100ul solution lyophilized powder
Buffer: PBS, pH 7.5; no preservative
Reconstitute powder in PBS at 1 mg/ml

Storage
Short-term: unopened, undiluted vials for less than a week at 4oC.
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 (1-5 ug/ml of affinity pure IgG using Chemiluminescence technique). It is recommended not to heat the samples prior to loading to prevent gluts aggregation. Human Caco-2 cells can be used as positive control.

Histochemistry: We recommend the use of affinity purified antibody at 5-20 ug/ml in 4% paraformaldehyde, 0.15% picric acid for 20 min, and then permeabilized with 0.1% Triton X-100.

Flow cytometry: recommended conc is ~10 ug antibody per ml (1 million cells). Perform the antibody binding in small volume of ~200 ul.

Specificity & Cross-reactivity

Antibody cross-reactivity in various species is not known. We also supply other polyclonal antibodies made to the mouse, rat, and human glut-2 (see the web site for a complete listing).

General References: **1.** Fukumoto, H., et al (1988) Proc. Natl. Acad. Sci. 85, 5434-5438; Thorens, B, et al (1988) Cell, 55, 281-290; 2. Asano, T et al (1989) Nucleic Acid Res. 17, 6386; Suzue, K., et al (1989) Nucleic Acid Res. 17, 10099.

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

Lee S-H 2003, J. Histochem. Cytochem., 51: 1005-1015, IHC
Osswald C, 2005, Mol. Cell. Biol.,25: 78 – 87, WB,
Harrison, KA, 1999, Nature Genetics 23, 71 – 75, IF
Gorogawa S-I, 2004, BBRC 319, 1159-1170, WB,
Brissova M, K, 2002, JBC 277, 11225-11232, WB, IHC,
Hori Y, 2002, PNAS, Dec 2002; 99: 16105 - 16110 WB, IHC,
Rutjes, N 2002, Kidney International 62, 832, IHC
Sumazaki R, 2004, Nature Genetics36, 83 - 87 IHC
Rodriguez SM, 2004 J Anim Sci, 82: 3015 - 3023. WB

*This product is for In vitro research use only.

Related material available from ADI

Antibodies for Glut 1-11 & SGLT-1/-6

GT23-M 70911A

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