



Product Information Sheet

Polyclonal Anti-Glut1

Catalogue No. PA1120

Lot No. 08J01

Ig type: rabbit IgG

Size: 100µg/vial

Specificity

Human, mouse, rat.

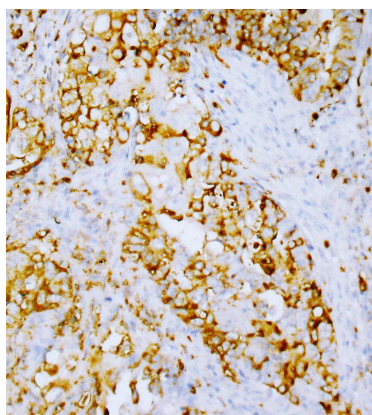
No cross reactivity with other proteins.

Recommended application

Western blot

Immunohistochemistry(P)

Immunocytochemistry



Immunogen

A synthetic peptide corresponding to a sequence at the N-terminal of human Glut1, different from the related mouse sequence by a single amino acid.

Purity

Immunogen affinity purified.

Application

Western blot

At 1-2µg/ml with the appropriate system to detect Glut1 in cells and tissues.

Immunohistochemistry(P)

At 1-2µg/ml to detect Glut1 in formalin fixed and paraffin embedded tissues. Bioling the sections is required.

Immunocytochemistry Suitable

Other applications have not been tested.

Optimal dilutions should be determined by end user.

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Thimerosal, 0.05mg NaN₃.

Reconstitution

0.2ml of distilled water will yield a concentration of 500µg/ml.

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for longer time.

To reorder contact us at:

Antagene, Inc.

Toll Free: 1(866)964-2589

email: Info@antageneinc.com

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BACKGROUND

GLUT1, also known as SLC2A1, is a major glucose transporter in the mammalian blood-brain barrier whose gene is mapped to 1p35-p31.3 and contains 10 exons. It is present at high levels in primate erythrocytes and brain endothelial cells. Not only can transport dehydroascorbic acid (the oxidized form of vitamin C) into the brain¹, GLUT1 is also likely to contribute to HTLV-associated disorders through interacting with HTLV envelope glycoproteins². Functionally, GLUT1 deficiency causes a decrease in embryonic glucose uptake and apoptosis, which may be involved in diabetic embryopathy³, by contrast, an increased expression of GLUT1 in some malignant tumors may suggest a role for glucose-derivative tracers to detect in vivo thyroid cancer metastases by positron-emission tomography scanning⁴.

REFERENCE

1. Agus, D. B.; Gambhir, S. S.; Pardridge, W. M.; Spielholz, C.; Baselga, J.; Vera, J. C.; Golde, D. W. : Vitamin C crosses the blood-brain barrier in the oxidized form through the glucose transporters. *J. Clin. Invest.* 100: 2842-2848, 1997.
2. Manel, N.; Kim, F. J.; Kinet, S.; Taylor, N.; Sitbon, M.; Battini, J.-L. : The ubiquitous glucose transporter GLUT-1 is a receptor for HTLV. *Cell* 115: 449-459, 2003.
3. Heilig, C. W.; Saunders, T.; Brosius, F. C., III; Moley, K.; Heilig, K.; Baggs, R.; Guo, L.; Conner, D. : Glucose transporter-1-deficient mice exhibit impaired development and deformities that are similar to diabetic embryopathy. *Proc. Nat. Acad. Sci.* 100: 15613-15618, 2003.
4. Lazar, V.; Bidart, J.-M.; Caillou, B.; Mahe, C.; Lacroix, L.; Filetti, S.; Schlumberger, M. : Expression of the Na(+)/I(-) symporter gene in human thyroid tumors: a comparison study with other thyroid-specific genes. *J. Clin. Endocr. Metab.* 84: 3228-3234, 1999.