

## Product Information

### Anti-GLUT1 (C-terminal)

produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200519**

#### Product Description

Anti-GLUT1 (C-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at the C-terminus of human GLUT1 (GeneID: 6513), conjugated to KLH. The corresponding sequence is identical in rat and mouse GLUT1. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-GLUT1 (C-terminal) specifically recognizes rat GLUT1. The antibody may be used in several immunochemical techniques including immunoblotting (55-70 kDa). Detection of the GLUT1 band by immunoblotting is specifically inhibited by the GLUT1 immunizing peptide.

Glucose uptake and metabolism is crucial to the normal function of mammalian cells. Its transfer across the cell membranes is mediated by a family of transporters termed glucose transporters (GLUTs).<sup>1</sup> Accelerated glucose uptake and consumption is a characteristic of malignant cells.<sup>2</sup> Defects in glucose uptake result in insulin resistance and type II diabetes.<sup>3</sup> Glucose transporters family include 13 members that show tissue and cell-type specific expression. Glucose transporter 1 (GLUT1, SLC2A1) is localized to the membrane and regulates basal glucose levels. In contrast, GLUT4 in response to insulin, translocates from intracellular compartments to the plasma membrane to increase glucose transport into adipose tissue, skeletal and cardiac muscle.<sup>3</sup> GLUT1 is widely expressed and its increased expression is associated with cell growth and in malignant transformation.<sup>2,4,5</sup> GLUT1 is highly expressed in the brain and spinal cord, with a relative high density in the cerebellum.<sup>6,7</sup> GLUT1 is the main glucose transporter in the blood-brain barrier (BBB). The vascular form of GLUT1 is mainly localized in endothelial cells of blood vessels. GLUT1 (45kDa, non-glycosylated form) has been shown to be modified by N-glycosylation resulting in several glycosylated forms (55 and 70 kDa) with differential patterns of cell and tissue expression.

#### Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~1.0 mg/mL

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

#### Product Profile

**Immunoblotting:** a working concentration of 0.5-1.0 µg/mL is recommended using rat spinal cord extracts (S1 fraction).

**Note:** In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

#### References

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ER,RC,PHC 12/12-1