



RABBIT ANTI-GLUT-3 POLYCLONAL ANTIBODY

CATALOG NUMBER:	AB1344	QUANTITY:	50 µL
LOT NUMBER:			
ALTERNATE NAMES:	Glucose transporter type 3, brain, GLUT-3, Glut3	EPITOPE:	C-terminus
HOST:	Rabbit		
BACKGROUND:	<p>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 trans-membrane 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.</p> <p>Glut-3 (mouse 493-aa) is the main transporter in neurons, whereas Glut-4 is primarily expressed in muscle and adipose tissue and regulated by insulin. Its function is facilitative glucose transport, particularly in neurons. It is membrane associated, and recommended preparations for western blots or IP should be membrane preparations. Being associated primarily with neurons, it localizes chiefly with brain tissues throughout development.</p>		
SPECIFICITY:	This antibody reacts with GLUT-3 proteins and isoforms from mouse and rat; there is no detectable true cross reactivity with human GLUT-3.		
IMMUNOGEN:	A synthetic peptide from the C-terminus of mouse GLUT-3 protein, with no cross reactivity to human GLUT-3 protein consisting of amino acids 481-483 of mouse Glut-3 {NSMQPVKETPGNA}.		
APPLICATIONS:	Western blot: 1:1000-1:5000 dilutions minimum. Crude serum antibody, membrane preparations are suggested for increased specificity. ~ 60kDa broad band is observed in most samples (Provoda, et al 2000) using membrane preparations. Immunocytochemistry: see Ciudad et al.		
SPECIES REACTIVITY:	Mouse, rat, not human. Other species not tested.		
CONTROL:	Mouse brain membrane preparations.		
PRESENTATION:	Unpurified rabbit serum in liquid, containing 0.05% sodium azide as a preservative.		
STORAGE/HANDLING:	Store at -20°C in undiluted aliquots for up to 1 year from date of receipt. Prevent repeated freeze/thaw cycles; keep tightly sealed to prevent drying out.		



REFERENCES:

Cheng, M et al. (2000). Insulin-like growth factor ` regulates developing brain glucose metabolism. *PNAS, USA* **97(18)**:10236-10241. {western blot}

Provaoda, CJ et al (2000). Evidence for a primary endocytic vesicle involved in synaptic vesicle biogenesis. *J. Biol. Chem* 275(10):7004-7012. {western blot}

Cidad, P et al (2001) Expression of glucose transporter GLUT3 by endotoxin in cultured rat astrocytes: role of nitric oxide. *J Neurochem* 79:17-24. {western blot, ICC}

Important Note: *During shipment, small volumes of product will occasionally become entrapped in the seal of the product vial. For products with volumes of 200 μ L or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the container's cap.*

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