Human/Mouse/Rat GLUD1/GLUD2 Antibody

Monoclonal Mouse IgG_{2B} Clone # 848209

Catalog Number: MAB8027

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse and rat GLUD1/GLUD2 in ELISAs and Western blots.
Source	Monoclonal Mouse IgG_{2B} Clone # 848209
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human GLUD1/GLUD2 Ser54-Thr558 Accession # P49448
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

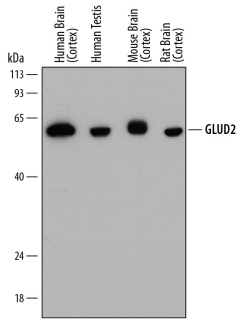
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.2 µg/mL	See Below
Immunohistochemistry	0.2-25 µg/mL	See Below
Simple Western	2 µg/mL	See Below

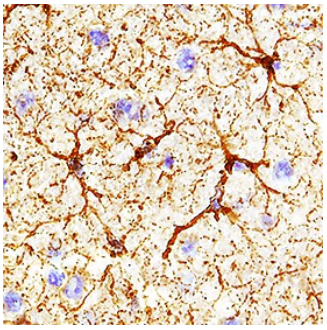
DATA

Western Blot



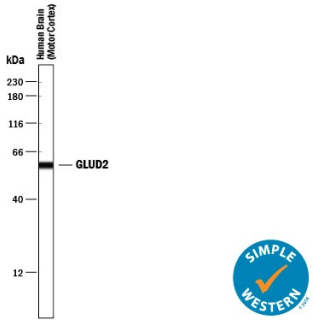
Detection of Human, Mouse, and Rat GLUD2 by Western Blot. Western blot shows lysates of human brain (cortex) tissue, human testis tissue, mouse brain (cortex) tissue, and rat brain (cortex) tissue. PVDF membrane was probed with 0.2 µg/mL of Mouse Anti-Human/Mouse/Rat GLUD1/GLUD2 Monoclonal Antibody (Catalog # MAB8027) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for GLUD2 at approximately 58 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



GLUD1/GLUD2 in Rat Brain. GLUD1/GLUD2 was detected in perfusion fixed frozen sections of rat brain using Mouse Anti-Human/Mouse/Rat GLUD1/GLUD2 Monoclonal Antibody (Catalog # MAB8027) at 0.2 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to astrocytes. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

Simple Western



Detection of Human GLUD2 by Simple Western™. Simple Western lane view shows lysates of human brain (motor cortex) tissue, loaded at 0.5 mg/mL. A specific band was detected for GLUD2 at approximately 58 kDa (as indicated) using 2 µg/mL of Mouse Anti-Human/Mouse/Rat GLUD1/GLUD2 Monoclonal Antibody (Catalog # MAB8027). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Glutamate dehydrogenase 2 (GLUD2 or GDH2) is an approximately 58 kDa mitochondrial enzyme that catalyzes the reversible interconversion of glutamate to alpha-ketoglutarate and ammonia. This activity is important in glutamine and ammonia metabolism as well as glutamatergic signal transduction. In contrast to the widely expressed GLUD1, GLUD2 expression is restricted to testicular Sertoli and Leydig cells, brain astrocytes, and renal tubule epithelial cells. GLUD2 and GLUD1 are synthesized with N-terminal mitochondrial transit peptides. Within amino acids 58-558, human GLUD2 and GLUD1 share 97% aa sequence identity.

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