ALPHA DIAGNOSTIC INTERNATIONAL

PRODUCT SPECIFICATION SHEET

Monoclonal Anti-Glutamate Antibodies

□ Cat # GLM22-M Mouse Monoclonal Anti-Glutamate, ascites **SIZE**: 100 ul

A distinct step in inter cellular communication involves termination of synaptic transmission via the removal of neurotransmitters by specialized transporters. The regulated exocytotoic release of neurotransmitters in response to neural activity requires storage within intracellular vesicles. In the nervous system, these vesicles are the synaptic vesicles that are derived from the endosomal compartment, whereas in endocrine cells larger secretory granules, such as the chromaffin granules of adrenal medulla, are derived from the trans golgi networks. Glutamate is the main excitatory neurotransmitter in the brain. To date five glutamate Transporters have been cloned: **GLAST (EAAT1), GLT1 (EAAT2), EAAC1 (EAAT3), EAAT4, and EAAT5**. These transporters are believed to be critical in reducing potentially toxic extracellular concentration of glutamate by rapid uptake into nerve terminals and glial cells.

Source of Antigen and Antibodies

Antigen	L-Glutamic acid was coupled to KLH
Ab Host/type	Mice were injected. Resulting clones were expanded as ascites. Clone GLM22-M produces an IgG1 isotype antibody.
2-ab	Cat # 40320, **goat anti-mouse IgG-HRP** (AP, biotin, FITC conjugates also available).
	# 20008-1, Mouse (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Ascites (unpurified)

□ 100ul □ solution □ lyophilized

Supplied in Buffer: 0.05% azide

Reconstitute powder in 100 ul PBS

Storage

Short-term: unopened, undiluted liquid vials at 20°C and powder at 4°C or -20°C..

Long-term: at –20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20°C or below.

Shipping: 4°C for solutions and room temp for powder

Specificity of Antibodies & Recommended Usage

Anti-glutamate antibodies were evaluated for specificity by dot blots. The antiserum recognizes L- Glutamic acid when conjugated with glutaraldehye or immobilized on Sepharose. Antibody crossreact with Gly-Glu and Asp-Glu. Weak crossreaction may be observed with D-Glu, L-Gln, L-Asn, β-Ala, Gly, 5-aminovaleric acid, γ-aminobutyric acid (GABA), and Gly-Asp. Working dilution will depend upon experimental conditions any may vary from 1:500-1:2500. Antibody titer by dot blot is approx. 1:5K. The product may be used to localize Glu, a major neurotransmitter in the brain by IHC at antibody dilution 1:250-1:1000.

General References:

Tanaka, K. (1993) *Neurosci. Lett.* **16**:149; Shashidharan, P. et al (1993) *BBA* **1216**:161; Rothstein, J. D. et al (1994) *Neuron* **13**:713; Rothstein, J. D. et al (1995) *Ann Neurol* **38**:

**This product is for In vitro research use only.*

Related material available from ADI

ReadyBrain Blot: **Study distribution of proteins in rat/mouse brain in hours** (proteins from 12 different regions are supplied on a single blot)

Western blot Recycling Kit; Strips antibodies in <15 min at room temp (no mercaptoethanol or heating required)

Some New Antibodies ……..

Antib-GABA, Glutamate receptors and transporters

★**Transporters** For GABA ★ Glutamate ★ Serotonin ★ VMAT1/2 ★ Proline ★ Dopamine, NET, Creatine,

GLM22-M 170104SV

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