

**PRODUCT SPECIFICATION SHEET**

**Polyclonal Anti-Glutamate Antibodies and Protein Control**

Cat # GLM23-A,	Rabbit Polyclonal Anti-Glutamate IgG,	<b>SIZE:</b> 100 ug
Cat # GLM23-N-100,	Glutamate-Albumin (BSA) conjugate (blocking antigen)	<b>SIZE:</b> 100 ug

A distinct step in inter cellular communication involves termination of synaptic transmission via the removal of neurotransmitters by specialized transporters. The regulated exocytotic 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**

<b>Ant i gen</b>	L-Glutamic acid was coupled to KLH
<b>Ab Host / t ype</b>	Rabbit, Polyclonal IgG (Cat # <b>GLM23-A</b> ) purified over glutamic acid-BSA conjugate coupled to Agarose
<b>2- Ab</b>	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
<b>- ve cont rol I gG</b>	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

**# GLM23-N-100 (glutamic acid-BSA conjugate)**

L-Glutamic acid was coupled to BSA to prepare blocking antigen for antibody# GLM23-A. It is supplied in PBS, pH 7.4 as 100 ug/vial in liquid or powder form. Reconstitute powder in 100 ul PBS to prepare 1 mg/ml stock. It is suitable for ELISA or as blocking antigen or other applications where Glu-BSA conjugate is required. Store liquid at -20°C in small size aliquots. Do not freeze, thaw, or heat repeatedly.

**Form & Storage of Antibodies/Peptide Control**

**Affinity pure IgG**  
100 ug/100ul solution lyophilized powder  
Supplied in **Buffer:** PBS+0.1% BSA  
**Reconstitute powder** in PBS at 1mg/ml

**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 immobilized on Sepharose or blotting membranes. No crossreaction was observed L-aspartate, glutamine, asparagine, and alanine. Weak activity may be exhibited with Gly-Asp, GABA, beta-alanine, glycine and 5-aminovaleic acid at high concentration 5-10 mM. Weak crossreaction may also be observed with dipeptide containing Asp-Glu and Gly-Glu. The product may be used to localize glutamate in immunohistochemical techniques. 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,

GLM23-A-N-100                      80306A

**India Contact:**

**Life Technologies (India) Pvt. Ltd.**

306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi - 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444

Email: [customerservice@lifetechindia.com](mailto:customerservice@lifetechindia.com) Website: [www.lifetechindia.com](http://www.lifetechindia.com)