



**PRODUCT SPECIFICATION SHEET**

**Glutamine Antibodies**

Cat # GLN55-A ,	Anti-Glutamine IgG, aff pure	<b>SIZE:</b> 100 ul
Cat # GLN55-N-100	Glutamine -BSA Protein 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>Antigen</b>	L-glutamine was coupled to KLH
<b>Ab Host/type</b>	Rabbit, Polyclonal IgG, purified over antigen-agarose (Cat # GLN55-A)
<b>2-Ab</b>	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
<b>-ve</b>	Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

**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 -20OC and powder at 4oC or -20oC..

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

**Stability:** 6-12 months at -20oC or below.  
**Shipping:** 4oC for solutions and room temp for powder

**Specificity of Antibodies & Recommended Usage**

Anti-glutamine antibodies were evaluated for specificity by dot blots. The antiserum recognizes L- glutamine when conjugated with glutaraldehyde to BSA (#**GLN55-N-100**). glutamine-BSA conjugate can also be used to neutralize or block antibodies to prove antibody specificity in IHC.

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 aspartic acid, 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,

GLN55-A-N-100 80603A