

PRODUCT SPECIFICATION SHEET

Aspartate/Aspartic acid Antibodies

Cat # ASP51-A ,	Anti-Aspartate IgG, aff pure	SIZE: 100 ul
Cat # ASP51-N-100	Aspartate-BSA Protein conjugate (blocking antigen)	SIZE: 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

Antigen	L-Aspartic acid was coupled to KLH
Ab Host/type	Rabbit, Polyclonal IgG, purified over antigen-agarose (Cat # ASP11-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve	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-aspartate antibodies were evaluated for specificity by dot blots. The antiserum recognizes L- aspartic acid when conjugated with glutaraldehyde to BSA (#ASP51-N-100). Aspartate-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,

ASP51-A-N-100

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