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Product Information

ANTI-ASPARTATE

Developed in Rabbit
Delipidized Whole Antiserum

Product Number **A 9684**

Product Description

Anti-Aspartate is developed in rabbit using purified aspartate conjugated to KLH as the immunogen. The antiserum has been treated to remove lipoproteins.

The amino acids L-glutamate (Glu) and L-aspartate (Asp) are considered the major excitatory neurotransmitters in the central nervous system (CNS) and represent the most abundant mammalian neurotransmitter class. Both L-glutamate and L-aspartate are present in the brain at high concentrations and are distributed in most excitatory pathways in the CNS.^{1,2} Glutamate and Aspartate immunoreactivities are localized in high concentrations in synaptic terminals.^{3,4} In nerve cells, L-aspartate is synthesized by the transamination route with L-glutamate being an indirect precursor.⁵ The actions of the excitatory amino acids on neurons are mediated by different receptor subtypes.⁶ These receptors are coupled to integral ion channels or to a second messenger system which utilizes inositol trisphosphate (IP3). L-glutamate and L-aspartate may play an important role in the pathogenesis of certain neurological disorders such as Huntington's disease, Alzheimer's disease, epilepsy, and brain ischemia.⁷ The excitotoxic and neurotoxic effects of L-glutamate, leading to extensive neuronal damage, appear to be mediated by the N-methyl-D-aspartate (NMDA) receptor subtype.^{6,7}

Reagents

Rabbit Anti-Aspartate is supplied as a liquid containing 0.1% sodium azide as a preservative.

Precautions and Disclaimer

Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store 0-5 °C. For extended storage, solution may be frozen in working aliquots. Repeated freezing and thawing is **not** recommended. Storage in "frost-free" freezers is **not** recommended. If slight turbidity occurs upon prolonged storage, clarify by centrifugation before use.

Product Profile

The Antiserum reacts with Asp-KLH, Asp-BSA, and KLH, but not with BSA using a dot blot immunobinding assay. The Antiserum also reacts with L-aspartate, Gly-Asp, and Asp-Glu. No reactivity is seen with L-glutamate, L-glutamine, and L-alanine. Weak cross-reactivity is seen with L-asparagine, GABA, β -alanine, glycine, and 5-aminovaleric acid.

The Antiserum to L-aspartate may be used in immunohistochemical techniques on formalin or glutaraldehyde fixed, vibratome or frozen sections of human or animal tissues. Immunohistochemical methods provide increased anatomical resolution over conventional biochemical methods.

In order to obtain best results in different preparations, it is recommended that each individual user determine their optimal working dilutions by titration assay.

References

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