ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Human Neuron-specific enolase (NSE/gamma enolase) protein

Cat. # NSE15-N-100 Human Brain NSE (NSE/gamma enolase) protein **SIZE**: 100 ug

The glycolytic enzyme enolase (2-phospho-Dglycerate hydrolyase) exists as several dimeric isoenzymes (aa, ab, ag, bb and gg) composed of three distinct subunits: a, b, and g (alpha, beta, and gamma). Three isoenzymes are found in human brain: aa, ag, and gg. The ag and gg-enoloase isoenzymes are also known as neuron-specific enolase (NSE) as these isoenzymes initially were detected in neurons and neuronendocrine cells. Lung cancer is one of the most spread cancer forms with incidences about 50-100 per 100,000 population. Approximately 20% of the lung cancer is small cell lung cancer. NSE has been shown to be a valuable tumor marker of neuroendocrine origin, particulary in small cell lung cancer and in neuroblastoma. Patients with small cell lung cancer show various proportions of ag and gg isoenzymes. The determination of NSE should detect ag and gg isoforms with the same sensitivity. The antibodies for this particular assay are specific for the g-subunit without cross reactivity with a or b subunits. NSE is reported to be useful diagnostic marker for lung cancer, neuroblastoma, melnoma, seminoma and in injury of central nervous system. In addition to the above, NSE can be a valuable tool in following-up the effect of chemotherapy of small cell lung cancer, in prognostic evaluation of patients with small cell lung cancer, and in differential diagnosis between cell lung cancer and non-small cell lung cancer.

Protein name Gamma-enolase
Synonyms EC 4.2.1.11; 2-phospho-D-glycerate hydro-lyase; Neural Enolase; Neuron-specific Enolase; NSE; Enolase 2
Gene name Name: ENO2

Source of Antigen and Antibodies

Human NSE (gamma-enolase) was purified from human brain (>95%) using proprietary techniques. Purified NSE ~45 Kda and >95% pure by SDS-APGE. It is supplied in liquid frozen in a 0.01M NaH2PO4 buffer pH 7.4 containing 0.15M NaCl and 0.005M MgSO4 in liquid at 1 mg/ml (see lot sp. concn on the vial) or in powder form. Reconstitute powder in water at a desired concn. Store liquid stock at -20oC or below in suitable size aliquots. Do not freeze and thaw.:

All human derived material has been tested negative for HIV, HCV, and HbSAg. Nevertheless, all precautions should be taken and samples be treated as potentially hazardous.

Form & Storage of Antibodies/Peptide Control

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

General References: McAleese Sm (1988) Eur. J. Biochem. 178, 413-417; Oliva D (1989) Gene 79, 355-360;

*This product is for In vitro research use only.

Related material available from ADI

Recombinant human NSE, Rat NSE and antibodies

Human NSE ELISA kits

NSE15-N-100 80604A

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