ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

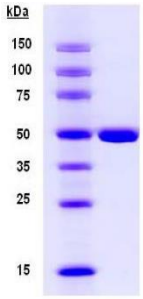
Human neuron-specific enolase (NSE/gamma enolase) protein

☐ Cat. # NSE16-R-10 Recombinant (E. coli) Human neuron-specific enolase (NSE/gamma enolase) protein **SIZE**: 10 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



Full-length, recombinant, human gamma-enolase (1-433 aa) was expressed in E. coli with N-terminal His-Tag and S-Tag sequences.
Purified NSE ~52 Kda and >95% pure by SDS-PAGE. It is supplied in PBS, pH 7.4 and protease inhibitors in liquid or lyophilized in the same buffer (lot specific concn on the vial). Store liquid or power at -20oC or belwo.

Do not freeze, thaw, or heat repeatedly.**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

Recommended Usage

Western Blotting (load 50-500 ng/lane) and detect with appropriate antibodies.

ELISA (coat at 1-5 ug/ml).

Specificity & Cross-reactivity

Anti-human NSE IgG reacts with human. Antibody may crossreact with Human NSE protein is highly conserved in monkey, mouse, rat, bovine (98-100%).

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

Catalog# Description

NSE11-C Recombinant (E. coli) Human neuron-specific enolase (NSE/gamma enolase) protein control for western
NSE11-S Rabbit Anti-Human neuron-specific enolase (NSE/gamma enolase) peptide antiserum #1
NSE12-C Human brain neuron-specific enolase (NSE/gamma enolase) protein (purified) control for western
NSE12-M Mouse Monoclonal Anti-Human neuron-specific enolase (NSE/gamma enolase) protein IgG
NSE13-C Rat brain neuron-specific enolase (NSE/gamma enolase) protein (purified) control for western
NSE13-S Rabbit Anti-Rat neuron-specific enolase (NSE/gamma enolase) protein antiserum
NSE14-M Mouse Monoclonal Anti-Human neuron-specific enolase (NSE/gamma enolase) protein IgG
NSE15-N-100 Human brain neuron-specific enolase (NSE/gamma enolase) protein (purified)
NSE16-R-10 Recombinant (E. coli) Human neuron-specific enolase (NSE/gamma enolase) protein control for western

NSE16-R-10-Human-NSE-Protein 160901SV

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; **Email**: service@4adi.com
☎ (800) 786-5777; (210) 561-9515; **Fax**: (210) 561-9544; **Web Site**: www.4adi.com