

## Anti-NSE (Neuron specific enolase) Antibody

Our Anti-NSE (Neuron specific enolase) primary antibody from PhosphoSolutions is rabbit polyclonal.

Catalog # AN1498

### Specification

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#### Anti-NSE (Neuron specific enolase) Antibody - Product Information

|                   |                             |
|-------------------|-----------------------------|
| Application       | WB, IHC                     |
| Primary Accession | <a href="#">P09104</a>      |
| Reactivity        | Bovine, Chicken, Drosophila |
| Host              | Rabbit                      |
| Clonality         | Polyclonal                  |
| Isotype           | IgG                         |
| Calculated MW     | 47269                       |

#### Anti-NSE (Neuron specific enolase) Antibody - Additional Information

Gene ID **2026**

##### Other Names

2 phospho D glycerate hydrolyase antibody, 2-phospho-D-glycerate hydro-lyase antibody, Eno 2 antibody, ENO2 antibody, ENOG antibody, ENOG\_HUMAN antibody, Enolase 2 (gamma, neuronal) antibody, Enolase 2 antibody, Enolase 2 gamma neuronal antibody, Enolase2 antibody, Epididymis secretory protein Li 279 antibody, Gamma enolase antibody, Gamma-enolase antibody, HEL S 279 antibody, Neural enolase antibody, Neuron specific enolase antibody, Neuron specific gamma enolase antibody, Neuron-specific enolase antibody, neuronal enriched enolase antibody, Neurone specific enolase antibody, NSE antibody

##### Target/Specificity

Neuron specific enolase (NSE) is an enzyme which catalyzes the conversion of 2-phosphoglycerate to phosphoenolpyruvate in the glycolytic pathway, and also the reverse reaction in gluconeogenesis. It is one of three mammalian enolases, which are also known as ENO1, ENO2, and ENO3 or alternately as enolase alpha, beta and gamma. The three enolases have different cell type specific expression patterns, so that antibodies to them are useful cell type specific markers. (MacAlesse et al., 1988). NSE corresponds to ENO2 or enolase gamma and is heavily expressed in neuronal cells. ENO1 is also known as enolase alpha and as non-neuronal enolase. The third enolase, ENO3 or enolase beta, is expressed in muscle cells. Since neurons require a great deal of energy, they are very rich in glycolytic enzymes such as GAPDH and NSE. Antibodies to this protein are therefore useful to identify neuronal cell bodies, developing neuronal lineage and neuroendocrine cells. Release of NSE from damaged neurons into CSF and blood has also been used as a biomarker of neuronal injury (2).

##### Format

Neat Serum

##### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

##### Precautions

Anti-NSE (Neuron specific enolase) Antibody is for research use only and not for use in diagnostic

or therapeutic procedures.

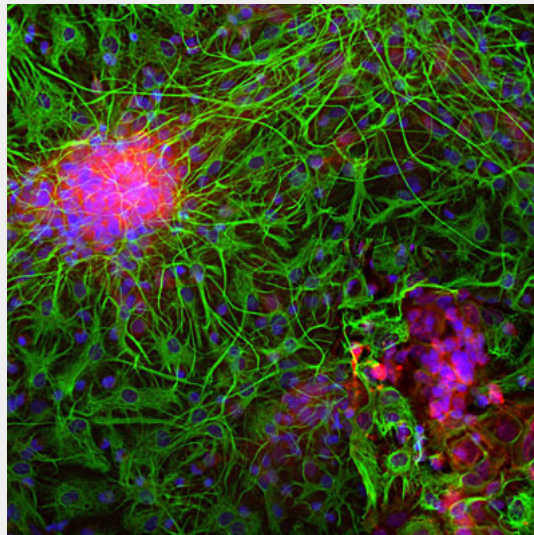
**Shipping**  
Blue Ice

### **Anti-NSE (Neuron specific enolase) Antibody - Protocols**

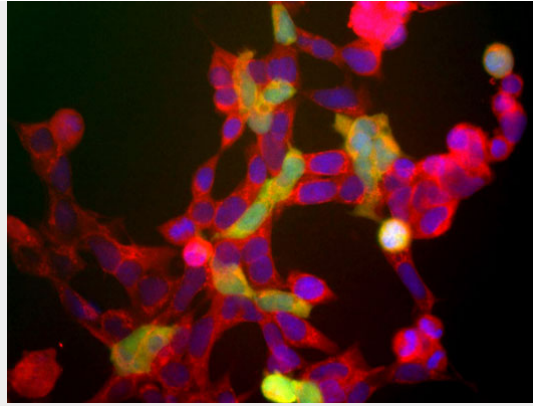
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

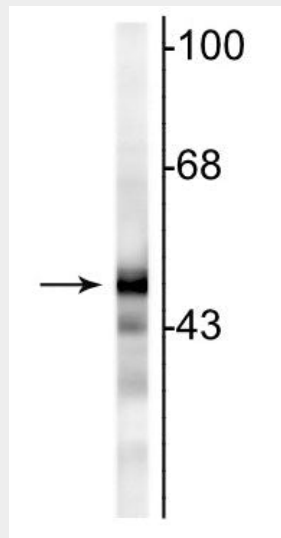
### **Anti-NSE (Neuron specific enolase) Antibody - Images**



Immunolabeling of E20 rat mixed neuron and glial cultured cells labeled with anti-neuron specific enolase antibody (cat. 1520-NSE, red, 1:500) and anti-GFAP antibody (cat. 621-GFAP, green, 1:5000). The blue is Hoechst stain of nuclear DNA. Anti-NSE labels protein expressed in neuronal cells and anti-GFAP labels protein expressed in intermediate filaments in astrocytic and other glial cells.



Immunolabeling of HEK 293 cells labeled with anti-neuron specific enolase antibody (cat. 1520-NSE, red, 1:500) and anti-UCHL1 antibody (cat. 2060-UCHL1, green, 1:500).



Western blot of rat cortical lysate showing specific immunolabeling of the ~47 kDa NSE protein.

### **Anti-NSE (Neuron specific enolase) Antibody - Background**

Neuron specific enolase (NSE) is an enzyme which catalyzes the conversion of 2-phosphoglycerate to phosphoenolpyruvate in the glycolytic pathway, and also the reverse reaction in gluconeogenesis. It is one of three mammalian enolases, which are also known as ENO1, ENO2, and ENO3 or alternately as enolase alpha, beta and gamma. The three enolases have different cell type specific expression patterns, so that antibodies to them are useful cell type specific markers.(MacAlesse et al., 1988). NSE corresponds to ENO2 or enolase gamma and is heavily expressed in neuronal cells. ENO1 is also known as enolase alpha and as non-neuronal enolase. The third enolase, ENO3 or enolase beta, is expressed in muscle cells. Since neurons require a great deal of energy, they are very rich in glycolytic enzymes such a GAPDH and NSE. Antibodies to this protein are therefore useful to identify neuronal cell bodies, developing neuronal lineage and neuroendocrine cells. Release of NSE from damaged neurons into CSF and blood has also been used as a biomarker of neuronal injury (2).