

**Neuron Specific Enolase (NSE) Antibody**  
Rabbit polyclonal antibody  
Catalog # AN1152

**Specification**

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**Neuron Specific Enolase (NSE) Antibody - Product Information**

Application	WB, IF
Primary Accession	<a href="#">P09104</a>
Reactivity	Human, Rat
Host	Rabbit
Clonality	polyclonal
Calculated MW	47 KDa

**Neuron Specific Enolase (NSE) Antibody - Additional Information**

Gene ID	2026
Gene Name	ENO2

**Other Names**

Gamma-enolase, 2-phospho-D-glycerate hydro-lyase, Enolase 2, Neural enolase, Neuron-specific enolase, NSE, ENO2

**Target/Specificity**

Recombinant human NSE expressed in and purified from E. coli.

**Dilution**

WB~~ 1:2000  
IF~~ 1:500

**Format**

Unpurified neat serum.

**Antibody Specificity**

Specific for the ~47kDa NSE protein.

**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**

Neuron Specific Enolase (NSE) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Shipping**

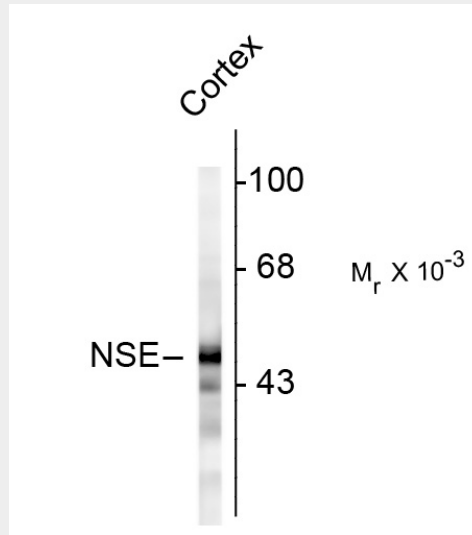
Blue Ice

**Neuron Specific Enolase (NSE) Antibody - Protocols**

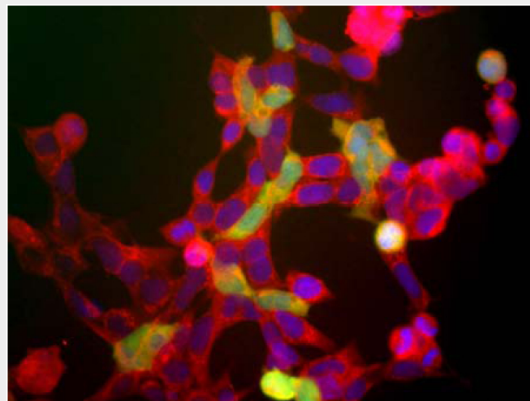
Provided below are standard protocols that you may find useful for product applications.

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

### Neuron Specific Enolase (NSE) Antibody - Images



Western blot of rat cortex homogenate showing specific immunolabeling of the ~ 47kNSE protein.



HEK 293 cells showing staining with anti-NSE antibody (red). The green channels shows staining for UCHL1.

### Neuron Specific Enolase (NSE) 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 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).

### **Neuron Specific Enolase (NSE) Antibody - References**

1. MacAlesse SM, Dunbar B, Fothergill JE, Hinks LJ, Day IN (1988) Complete amino acid sequence of neurone-specific gamma isozyme of enolase (NSE) from human brain and comparison with the non-neuronal alpha form (NNE). *Eur J Biochem.* 178(2):413-17.
2. Begaz, T., Kyriacou, D. N., Segal, J. and Bazarian, J. J. Serum biochemical markers for post-concussion syndrome in patients with mild traumatic brain injury. *J. Neurotrauma* 23:1201-1210 (2006).