

Datasheet for 100-401-E00**Neuron specific enolase (NSE) Antibody****Overview**

Description:	Anti-Neuron specific enolase (NSE) (RABBIT) Antibody - 100-401-E00
Item No.:	100-401-E00
Size:	100 µL
Applications:	IF, IHC, Multiplex, WB
Reactivity:	Human, Mouse, Rat, Bovine, Chicken
Host Species:	Rabbit

Product Details**Background:**

NSE antibody detects NSE protein. 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. 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. Anti-neuron specific enolase (NSE) antibody is ideal for investigators involved in Cell Signaling, Neuroscience, and Signal Transduction research.

Synonyms:	Gamma-enolase, 2-phospho-D-glycerate hydro-lyase, Enolase 2, Neural enolase, NSE
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	ENO2
Reactivity:	Human, Mouse, Rat, Bovine, Chicken

Immunogen Type:	Recombinant Protein
Immunogen:	Anti-NSE Antibody was produced by repeated immunizations with recombinant human NSE expressed in E. coli.
Purity/Specificity:	Anti-NSE antibody directed against human neuron specific enolase protein. This antibody is a monospecific neat serum. The antibody has been directly tested for reactivity in bovine, chicken, human, mouse, and rat. Cross reactivity with NSE from other species has not been determined but reactivity on other mammalian tissues is expected.
Relevant Links:	• UniProtKB - P09104 • GeneID - 2026 • UniProtKB - P09104.3

Application Details

Tested Applications:	IF, IHC, Multiplex, WB
Application Note:	Anti-Neuron specific enolase (Rabbit) antibody has been tested by Western Blot, IHC, ICC, and IF. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 47kDa in size corresponding to NSE protein by western blotting.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
IF:	1:500
WB:	1:2000

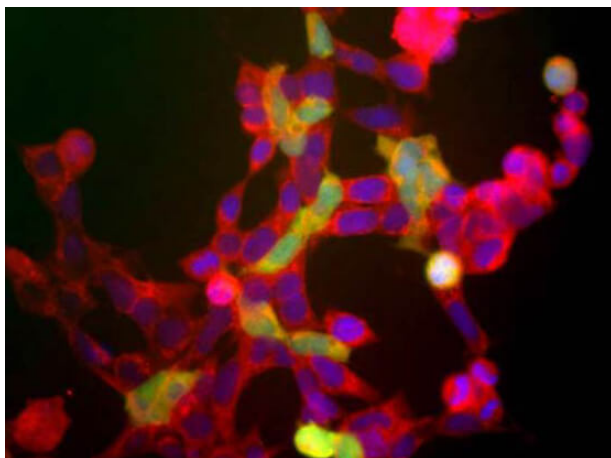
Formulation

Physical State:	Liquid
Concentration:	Titred value sufficient to run approximately 10 mini blots.

Shipping & Handling

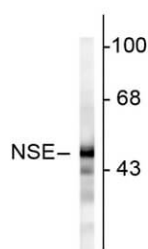
Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. This product is stable at 4° C as an undiluted liquid. For extended storage, aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Immunofluorescence Microscopy

Immunofluorescence Microscopy of Rabbit Anti-NSE (Neuron specific enolase) antibody. Tissue: HEK 293 cells. Fixation: 0.5% PFA. Antigen retrieval: not required. Primary antibody: NSE antibody at 10 µg/mL for 1 h at RT. Secondary antibody: Fluorescein rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: NSE is cytoplasmic. Staining: Anti-NSE antibody (red). The green channels shows staining for UCHL1.



Western Blot

Western Blot of Rabbit Anti-Neuron specific enolase (NSE) antibody. Lane 1: rat cortex homogenate. Lane 2: none. Load: 10 µg per lane. Primary antibody: NSE antibody at 1:1000 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: ~ 47k, ~ 47k for NSE protein. Other band(s): none.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.