

## Anti-Neuron Specific Enolase (NSE)

| Clone  | Species | Ig Class   |
|--------|---------|------------|
| MIG-N3 | Mouse   | IgG1/kappa |

| Catalog No.         | Description                                                                                                                                             |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Manual</b>       |                                                                                                                                                         |
| <b>AM055-5M</b>     | 6 ml of Ready-to-Use Antibody for use with BioGenex Super Sensitive™ Detection Systems                                                                  |
| <b>VM055-5M</b>     | 6 ml of Ready-to-Use Plus Antibody                                                                                                                      |
| <b>Concentrated</b> |                                                                                                                                                         |
| <b>MU055-UC</b>     | 1 ml of Concentrated Antibody for use with BioGenex Super Sensitive™ Detection Systems                                                                  |
| <b>MU055-5UC</b>    | 0.5 ml of Concentrated Antibody for use with BioGenex Super Sensitive™ Detection Systems                                                                |
| <b>Automation</b>   |                                                                                                                                                         |
| <b>AM055-10M</b>    | 10 ml of Ready-to-Use Antibody in a barcode labeled vial for use with BioGenex Super Sensitive™ Detection Systems and i6000™ Automated Staining Systems |
| <b>AX055-YCD</b>    | Ready-to-Use Antibody in Barcode labeled vial for use on the Xmatrx® Elite Staining System, 160 tests                                                   |
| <b>AX055-50D</b>    | Ready-to-Use Antibody in Barcode labeled vial for use on the Xmatrx® Elite Staining System, 50 tests                                                    |
| <b>AX055-4M</b>     | Ready-to-Use Antibody in Barcode labeled Vial for use on the NanoVip™ Staining System, 50 tests                                                         |
| <b>AX055-10M</b>    | Ready-to-Use Antibody in Barcode labeled Vial for use on the NanoVip™ 300 Staining System, 100 tests                                                    |

### Recommended Detection Kits:

<https://biogenex.com/ihc-detection-kits/>

### Antibody Incubation: 30-60 Min at RT

**Control Tissue:** Pancreas or Nerve as available with Biogenex FB-055M\* & FG-055M\*

**Recommended Dilution for Concentrated Antibody:**

**1:100 - 200 in HK941**

**Recommended Pretreatment: EZ-AR2 (HK522-XAK)**

### Intended Use

**For In Vitro Diagnostic Use.** This antibody is designed for the specific localization of human neuron-specific enolase (NSE) in formalin-fixed, paraffin-embedded (FFPE) tissue sections. Evaluation must be performed by a qualified pathologist.

### Summary and Explanation

Neuron-specific enolase (NSE), the gamma-gamma isoform of the cytoplasmic enzyme enolase, is predominantly found in neurons and neuroendocrine cells. In normal tissue, most neurons and their processes exhibit strong NSE expression, except for Purkinje cells. NSE is also present in Schwann cells and has been

identified in a variety of neoplastic conditions, including ganglioneuromas, neuroblastomas, schwannomas, malignant melanomas, pheochromocytomas, paragangliomas, carcinoid tumors, medullary thyroid carcinomas, pituitary adenomas, and endocrine tumors of the pancreas and gastrointestinal tract, as well as small cell lung carcinoma. Additionally, several non-neuronal and non-neuroendocrine tumors may express NSE, indicating that its presence alone is not definitive for establishing neuronal or neuroendocrine differentiation in neoplastic tissue.

### Storage and Handling

Store at 2–8°C. Prepare fresh dilutions before use. Diluted solutions are stable for one day at room temperature and can be stored at 2–8°C or –20°C for longer periods. Avoid repeated freeze-thaw cycles.

### Principles of the Procedure

IHC involves binding of a primary antibody to a target antigen, followed by visualization using a chromogenic detection system. The procedure can be manual or automated. Include appropriate positive and negative controls in each run.

### Reagents Provided

Mouse Monoclonal Antibody to human neuron-specific enolase (NSE) is affinity purified and diluted in PBS, pH 7.2, containing 1% BSA and 0.09% sodium azide.

### Precautions

Contains <0.1% sodium azide. Follow standard safety protocols. Wear appropriate PPE, avoid skin and mucous membrane contact, and do not pipette by mouth. Dispose of reagents per regulatory guidelines. SDS available on request.

### Quality Control

Refer to BioGenex Detection System documentation for guidance on quality control, including recommended positive and negative controls.

### Troubleshooting

For detection-related issues, consult the BioGenex Detection System documentation. For assistance, contact BioGenex Technical Support at 1-800-421-4149 or support@biogenex.com, or reach out to your local distributor.

### Expected Results

This antibody shows cytoplasm staining in positive cells in FFPE tissues. Refer to the BioGenex website for representative images. Result interpretation is the user's responsibility and should be confirmed with established diagnostic methods.

### Limitations of the Procedure

1. Staining results may vary due to improper tissue processing, fixation, or tissue variability. Endogenous enzymes or biotin may cause non-specific staining. HBsAg-positive tissues may yield false positives with HRP systems. Poor counterstaining or mounting can affect interpretation.
2. Please choose the appropriate catalogs as per the Instrument, as per the Automation/ Manual staining process and as per the user validated protocols.

### Bibliography:

3. Marangos PJ, Zomzely-Neurath C, York C. Determination and characterization of neuron specific protein (NSP) associated enolase activity. Biochem Biophys Res Commun. 1976;68(4):1309-1316. DOI: 10.1016/0006-291x(76)90339-9
4. Ishiguro Y, Kato K, Shimizu A, Ito T, Nagaya M. High levels of immunoreactive nervous system- specific enolase in sera of patients with neuroblastoma. Clin Chim Acta. 1982;121(2):173-180.

| Category     | Antibodies  | Revision No. | N           |
|--------------|-------------|--------------|-------------|
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DOI: [10.1016/0009-8981\(82\)90056-0](https://doi.org/10.1016/0009-8981(82)90056-0).

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6. Mjones P, Sagatun L, Nordrum IS, Waldum HL. Neuron-specific enolase as a marker is better than its reputation. *J Histochem Cytochem*. 2017;65(12):687-703. DOI: [10.1369/0022155417733676](https://doi.org/10.1369/0022155417733676)
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|                                                                                     |                                          |                                                                                     |                                    |
|-------------------------------------------------------------------------------------|------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------|
|    | Temperature Limitation                   |    | In Vitro Diagnostic Medical Device |
|  | Use By Date                              |  | Batch Code                         |
|   | Non-Sterile                              |  | Consult Instructions for Use       |
|   | Representative in the European Community |  | Manufacturer                       |

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