# Gamma-enolase Antibody for IHC / ENO2 Immunohistochemistry Antibody [clone MSVA-451M] (V5874)

| Catalog No. | Formulation | Size |
|---|---|---|
| V5874-100UG | Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide | 100 ug |
| V5874-20UG | Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide | 20 ug |

**Bulk quote request**

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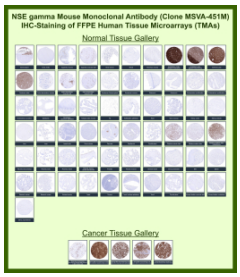
|---|---|
| **Species Reactivity** | Human |
| **Format** | Purified |
| **Host** | Mouse |
| **Clonality** | Monoclonal (mouse origin) |
| **Isotype** | Mouse IgG1, kappa |
| **Clone Name** | MSVA-451M |
| **Purity** | Protein G affinity |
| **UniProt** | P09104 |
| **Localization** | Cell membrane, Cytoplasm |
| **Applications** | Immunohistochemistry (FFPE) : 1:100-1:200 |
| **Limitations** | This Gamma-enolase Antibody for IHC / ENO2 Immunohistochemistry Antibody is available for research use only. |




Gamma-enolase Antibody for IHC Tissue Microarray (TMA) Multi-Tissue Expression. Immunohistochemistry analysis of Gamma-enolase (ENO2) expression in FFPE human tissue microarray (TMA) sections using Gamma-enolase Antibody for IHC clone MSVA-451M demonstrates strong cytoplasmic HRP-DAB brown staining in neuronal tissues, including cerebellum and cerebral cortex, as well as in neuroendocrine cell populations, while most non-neural tissues remain largely negative. In cancer tissue microarrays, variable cytoplasmic staining is observed in tumors with neuroendocrine or neuronal differentiation, supporting its use as a neuroendocrine lineage marker in immunohistochemistry-based analysis. The clear contrast between ENO2-positive cells and surrounding negative tissues enhances interpretability across TMA cores. Observed staining patterns are consistent with reference datasets such as the Human Protein Atlas, and heat-induced epitope retrieval was performed prior to staining to ensure optimal antigen detection in FFPE sections.

## Description

Gamma-enolase (ENO2), also known as neuron-specific enolase (NSE), is a glycolytic enzyme predominantly expressed in neurons and neuroendocrine cells, where it serves as a well-established marker of neuronal differentiation and neuroendocrine lineage. It is localized to the cytoplasm and is widely used in immunohistochemistry to identify cells of neuronal and neuroendocrine origin. Gamma-enolase Antibody for IHC is commonly applied to formalin-fixed, paraffin-embedded tissues to visualize these cell populations, where its characteristic cytoplasmic HRP-DAB brown staining pattern enables clear identification of neuronal structures and neuroendocrine components in tissue sections.

Gamma-enolase antibody, also referred to as ENO2 antibody or NSE antibody in the literature, recognizes a cytoplasmic protein with highly restricted expression in neuronal and neuroendocrine cells. This Gamma-enolase Antibody for IHC is specifically optimized for Tissue Microarray (TMA)-based immunohistochemistry, enabling standardized, high-throughput evaluation of ENO2 expression across large panels of normal and cancer tissues. In normal tissue TMAs, strong and consistent cytoplasmic staining is observed in neuronal populations of the central nervous system, including cerebellum and cerebral cortex, as well as in neuroendocrine cells within select tissues, while most non-neuronal tissues remain largely negative, providing excellent contrast for interpretation.

In cancer tissue microarrays, Gamma-enolase expression is prominently detected in tumors with neuroendocrine differentiation, where diffuse and often intense cytoplasmic staining highlights tumor cells of neuronal or neuroendocrine origin. This includes strong immunoreactivity in neuroendocrine tumors and subsets of carcinomas exhibiting neuroendocrine features. The clear distinction between ENO2-positive tumor cells and surrounding negative stromal or epithelial components supports the use of Gamma-enolase Antibody for IHC in identifying neuroendocrine differentiation and assisting in tumor classification and diagnostic workflows. The ability to evaluate these lineage-specific staining patterns across hundreds of TMA cores enhances reproducibility and comparative interpretation across tumor types.

Tissue Microarray (TMA) analysis enables side-by-side comparison of ENO2 expression across diverse tissue types under identical staining conditions, demonstrating highly reproducible cytoplasmic staining in neuronal and neuroendocrine tissues alongside minimal background in non-expressing regions. The performance of clone MSVA-451M in TMA-based IHC highlights its ability to generate strong, well-defined staining across a broad range of tissues, supporting its use in large-scale immunohistochemistry studies, biomarker validation, and tissue profiling applications. Observed staining patterns align with established ENO2 biology and reference datasets such as the Human Protein Atlas.

This antibody targets Gamma-enolase in research applications requiring precise and interpretable immunohistochemical detection of neuronal and neuroendocrine markers in FFPE tissue sections, making it well suited for studies of neuroendocrine tumors, neuronal differentiation, and tissue-specific expression analysis.

This antibody is part of the Gamma-enolase antibody collection, where additional ENO2 antibodies for immunohistochemistry can be explored.

## Application Notes

1. Optimal dilution of the Gamma-enolase Antibody for IHC / ENO2 Immunohistochemistry Antibody should be determined by the researcher.

2. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

## Immunogen

A synthetic peptide of human NSE gamma (around amino acids 416-433) was used as the immunogen for the ENO2/Gamma-enolase antibody.

## Storage

ENO2/Gamma-enolase antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

## Alternate Names

ENO2 antibody, NSE antibody, Gamma-enolase IHC antibody, neuron-specific enolase antibody, ENO2 immunohistochemistry antibody