



## Test Definition: KINM

Ki-67(MIB-1), Gastrointestinal/Pancreatic  
Neuroendocrine Tumors, Quantitative  
Immunohistochemistry, Manual

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### Overview

#### Useful For

Determining proliferation of tumor cells in paraffin-embedded tissue blocks from patients diagnosed with neuroendocrine tumors of the pancreas or gastrointestinal tract including metastases

#### Testing Algorithm

Includes pathology consultation charged separately.

#### Method Name

This is not an orderable test. Order PATHC / Pathology Consultation. The consultant will determine the need for special stains.

Immunohistochemistry, Semi- Quantitation, Hot-Spot Technique

#### NY State Available

Yes

### Specimen

#### Specimen Type

Special

#### Ordering Guidance

This is not an orderable test. If ordering for diagnostic purposes, order PATHC / Pathology Consultation and request the stain.

#### Shipping Instructions

Attach the green "Attention Pathology" address label (T498) to the outside of the transport container before putting into the courier mailer.

#### Necessary Information

1. Pathologist's name, address, and phone number are required.
2. Include accompanying pathology report stating the final diagnosis. If not available, a preliminary diagnosis is acceptable.

#### Specimen Required

This is not an orderable test. Order PATHC / Pathology Consultation. The consultant will determine the need for special stains.

**Supplies:** Pathology Packaging Kit (T554)

**Specimen Type:**

**Preferred:** Formalin-fixed, paraffin-embedded tissue block containing neuroendocrine tumor of the pancreas or gastrointestinal (GI) tract including metastases.

**Acceptable:** 2 unstained sections, containing neuroendocrine tumor of the pancreas or GI tract including metastases, on charged slides cut at 4 microns <1 month ago. Tissue on the slides should have been fixed in 10% neutral buffered formalin.

**Submission Container/Tube:** Pathology Packaging Kit

**Collection Instructions:** Submit formalin-fixed, paraffin-embedded tissue block

**Additional Information:** Paraffin block will be returned with the final report.

## Forms

### Reject Due To

No specimen should be rejected.

### Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

## Clinical & Interpretive

### Clinical Information

Ki-67(MIB-1 clone) is a monoclonal antibody that reacts with cells undergoing DNA synthesis by binding to the Ki-67 antigen, a marker known to be expressed only in proliferating cells. By measuring the amount of tumor cells expressing Ki-67, an estimate of DNA synthesis can be determined. Studies suggest that Ki-67(MIB-1) analysis of paraffin-embedded tissue specimens may provide useful prognostic information in various tumor types.

### Reference Values

This is not an orderable test. Order PATHC / Pathology Consultation. The consultant will determine the need for special stains.

Varies by tumor type; values reported from 0% to 100%

### Interpretation

Results will be reported as a percentage of tumor cells staining positive for Ki-67(MIB-1). Semi-quantitative Ki-67(MIB-1) results should be interpreted within the clinical context for which the test was ordered.

### Cautions

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The paraffin block analyzed must be representative of the patient's tumor.

Test results should be interpreted in the context of clinical findings and other laboratory data

**Clinical Reference**

1. La Rosa S. Diagnostic, Prognostic, and Predictive Role of Ki67 Proliferative Index in Neuroendocrine and Endocrine Neoplasms: Past, Present, and Future. *Endocr Pathol.* 2023;34(1):79-97. doi:10.1007/s12022-023-09755-3
2. Nagtegaal ID, Odze RD, Klimstra D, et al. The 2019 WHO classification of tumours of the digestive system. *Histopathology.* 2020;76(2):182-188. doi:10.1111/his.13975

**Performance****Method Description**

A 4-micron thick section is cut from the paraffin block. The section is stained with an immunoperoxidase method using the monoclonal antibody Ki-67 (MIB-1 clone). This is the paraffin nuclear epitope to the Ki-67 antigen. Any nucleus that has an antigen-antibody complex will cause the bright-field, brown chromogen, diaminobenzidine (DAB), to precipitate onto it. All nuclei, both DAB-positive and -negative, are counterstained with diluted hematoxylin.(Unpublished Mayo method)

**PDF Report**

No

**Day(s) Performed**

Monday through Friday

**Report Available**

4 to 6 days

**Specimen Retention Time**

1 week after results are reported. Material made at Mayo Clinic may be retained at Mayo Clinic indefinitely.

**Performing Laboratory Location**

Mayo Clinic Laboratories - Rochester Main Campus

**Fees & Codes****Fees**

- Authorized users can sign in to [Test Prices](#) for detailed fee information.
- Clients without access to Test Prices can contact [Customer Service](#) 24 hours a day, seven days a week.
- Prospective clients should contact their account representative. For assistance, contact [Customer Service](#).

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### Test Classification

This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. It has not been cleared or approved by the US Food and Drug Administration.

### CPT Code Information

88360

### LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
KINM	Ki67 GI/Pancreas NET IHC Manual	29593-1

Result ID	Test Result Name	Result LOINC® Value
71674	Interpretation	29593-1
71675	Participated in the Interpretation	No LOINC Needed
71676	Report electronically signed by	19139-5
71677	Material Received	81178-6
71678	Disclaimer	62364-5
71845	Case Number	80398-1