MAYO CLINIC LABORATORIES

Test Definition: KIPM

Ki-67(MIB-1), Pulmonary, Quantitative Immunohistochemistry, Manual

Overview

Useful For

Determining proliferation of tumor cells in paraffin-embedded tissue blocks from patients diagnosed with carcinoid or atypical carcinoid of the lung including metastases, using a manual method

Method Name

Only orderable as a reflex. For more information see KI67P / Ki-67 (MIB-1), Pulmonary, Quantitative Immunohistochemistry, Automated.

Immunohistochemistry, Semi- Quantitation, Hot-Spot Technique

NY State Available

Yes

Specimen

Specimen Type

Special

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

Only orderable as a reflex. For more information see KI67P / Ki-67 (MIB-1), Pulmonary, Quantitative Immunohistochemistry, Automated.

Supplies: Pathology Packaging Kit (T554)
Specimen Type:
Preferred: Formalin-fixed, paraffin-embedded tissue block containing carcinoid/atypical carcinoid of the lung including metastases.
Acceptable: 2 Unstained sections on charged slides cut at 4 microns <1 month ago. Tissue on the slides should have been fixed in 10% neutral buffered formalin.
Container/Tube: Pathology Packaging Kit

Collection Instructions:

1. Submit formalin-fixed, paraffin-embedded tissue block.
2. Attach the green pathology address label included in the kit to the outside of the transport container.

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

Reject Due To

All specimens will be evaluated at Mayo Clinic Laboratories for test suitability.

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

Only orderable as a reflex. For more information see KI67P / Ki-67 (MIB-1), Pulmonary, Quantitative Immunohistochemistry, Automated.

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

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. Boland JM, Kroneman TN, Jenkins SM, et al. Ki-67 Labeling index in pulmonary carcinoid tumors: comparison between small biopsy and resection using tumor tracing and hot spot methods. Arch Pathol Lab Med. 2020;144(8):982-990. doi:10.5858/arpa.2019-0374-OA
2. 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

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
Rochester

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.

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

KIPM	Ki67 Pulmonary IHC Manual	In Process

Result ID	Test Result Name	Result LOINC® Value
72138	Interpretation	29593-1
72139	Participated in the Interpretation	No LOINC Needed
72140	Report electronically signed by	19139-5
72141	Material Received	81178-6
72142	Disclaimer	62364-5
72143	Case Number	80398-1