

## Overview

### Useful For

Identification of anaplastic lymphoma kinase overexpression

Diagnosis of inflammatory myofibroblastic tumor, anaplastic large-cell lymphoma, and for targeted therapy of lung adenocarcinoma

### Reflex Tests

Test Id	Reporting Name	Available Separately	Always Performed
IHPCA	IHC Additional	No	No
IHPCI	IHC Initial	No	No

### Testing Algorithm

For the initial immunohistochemistry (IHC) stain performed, the appropriate bill-only test ID will be added and charged (IHPCI). For each additional IHC stain performed, an additional bill-only test ID will be added and charged (IHPCA).

### Method Name

Immunohistochemistry (IHC)

### NY State Available

Yes

## Specimen

### Specimen Type

Special

### Shipping Instructions

Attach the green pathology address label included in the kit to the outside of the transport container.

### Necessary Information

A pathology/diagnostic report and a brief history, including primary site of neoplasm, are required.

### Specimen Required

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

**Specimen Type:** Formalin-fixed, paraffin-embedded tissue block; or 3 unstained glass, "positively charged" slides with 4-microns, formalin-fixed, paraffin-embedded tissue

**Additional Information:** One slide will be stained with hematoxylin and eosin and returned.

## Forms

If not ordering electronically, complete, print, and send a [Immunohistochemical \(IHC\)/In Situ Hybridization \(ISH\) Stains Request](#) (T763) with the specimen.

## Reject Due To

Wet/frozen tissue Cytology smears Nonformalin fixed tissue Nonparaffin embedded tissue Noncharged slides ProbeOn slides	Reject
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## Specimen Stability Information

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

## Clinical & Interpretive

### Clinical Information

A subset of anaplastic large-cell lymphomas overexpresses anaplastic lymphoma kinase (ALK-1) protein, resulting from a translocation involving the *ALK1* gene. The abnormal ALK-1 expression can be in a nuclear or cytoplasmic distribution. Overexpression of ALK-1 protein is also useful for targeted therapy in lung adenocarcinoma and in the diagnosis of inflammatory myofibroblastic tumor. In normal tissue ALK-1 is negative.

### Interpretation

This test, when not accompanied by a pathology consultation request, will be answered as either positive or negative. If additional interpretation or analysis is needed, request PATHC / Pathology Consultation along with this test.

### Cautions

Age of a cut paraffin section can affect immunoreactivity. Stability thresholds vary widely among published literature and are antigen dependent. Best practice is for paraffin sections to be cut within 6 weeks.

### Clinical Reference

1. Hutarew G, Hauser-Kronberger C, Strasser F, Llenos IC, Dietze O: Immunohistochemistry as a screening tool for ALK rearrangement in NSCLC: evaluation of five different ALK antibody clones and ALK FISH. *Histopathology*. 2014 Sept;65(3):398-407
2. Stein H, Foss H, Durkop H, et al: CD30(+) anaplastic large cell lymphoma: a review of its histopathologic, genetic, and clinical features. *Blood*. 2000 Dec;96(12):3681-3695
3. Yi ES, Boland JM, Maleszewski JJ, et al: Correlation of IHC and FISH for ALK gene rearrangement in non-small cell lung carcinoma: IHC score algorithm for FISH. *J Thorac Oncol*. 2011 Mar;6(3):459-465

## Performance

### Method Description

Immunohistochemistry on sections of paraffin-embedded tissue.(Unpublished Mayo method)

### PDF Report

No

### Day(s) Performed

Monday through Friday

### Report Available

5 to 7 days

### Specimen Retention Time

Until reported

### 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

88342-Primary

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88341-If additional IHC

**LOINC® Information**

Test ID	Test Order Name	Order LOINC® Value
ALKLC	ALK for Lung Cancer IHC	47303-3

Result ID	Test Result Name	Result LOINC® Value
615714	Interpretation	59465-5
615715	Participated in the Interpretation	No LOINC Needed
615716	Report electronically signed by	19139-5
615717	Material Received	81178-6
615718	Disclaimer	62364-5
615719	Case Number	80398-1