

## Overview

### Useful For

Helpful in the screening for neurotrophic tyrosine receptor kinase (*NTRK*) rearranged tumors

### Reflex Tests

Test Id	Reporting Name	Available Separately	Always Performed
IHTOI	IHC Initial, Tech Only	No	No
IHTOA	IHC Additional, Tech Only	No	No

### Testing Algorithm

[For the initial technical component only immunohistochemical \(IHC\) stain performed, the appropriate bill-only test ID will be reflexed and charged \(IHTOI\). For each additional technical component only IHC stain performed, an additional bill-only test ID will be reflexed and charged \(IHTOA\).](#)

### Method Name

Immunohistochemistry

### NY State Available

Yes

## Specimen

### Specimen Type

TECHONLY

### Ordering Guidance

[This test includes only technical performance of the stain \(no pathologist interpretation is performed\). If diagnostic consultation by a pathologist is required order PATHC / Pathology Consultation.](#)

### Shipping Instructions

Attach the green pathology address label and the pink Immunostain Technical Only label included in the kit to the outside of the transport container.

### Specimen Required

**Supplies:** Immunostain Technical Only Envelope (T693)

**Specimen Type:** Tissue

**Preferred:** 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick.

**Acceptable:** Formalin-fixed, paraffin-embedded (FFPE) tissue block

## Digital Image Access

- Information on accessing digital images of immunohistochemical (IHC) stains and the manual requisition form can be accessed through this website: <https://news.mayocliniclabs.com/ihc-stains/>
- Clients ordering stains using a manual requisition form will not have access to digital images.
- Clients wishing to access digital images must place the order for IHC stains electronically. Information regarding digital imaging can be accessed through this website: <https://news.mayocliniclabs.com/ihc-stains/#FAQ>

## Forms

If not ordering electronically, complete, print, and send 1 of the following forms with the specimen:

[Immunohistochemical \(IHC\)/In Situ Hybridization \(ISH\) Stains Request](#)

## Reject Due To

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

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

## Clinical & Interpretive

### Clinical Information

Neurotrophic tyrosine receptor kinase (*NTRK*) is a family of 3 proto-oncogenes including *NTRK1*, *NTRK2*, and *NTRK3* which encode TRKA, TRKB, and TRKC proteins. Tropomyosin receptor kinase (TRK) immunohistochemistry may be used as a screen for identifying *NTRK* rearrangements and may be particularly helpful in driver-negative advanced malignancies such as secretory carcinoma, congenital infantile fibrosarcoma and lipofibromatosis-like neural tumors. Screening for *NTRK* rearranged tumors is important as patients have been shown to respond to TRK inhibitor therapy.

### Interpretation

This test includes only technical performance of the stain (no pathologist interpretation is performed). If diagnostic consultation by a pathologist is required order PATHC / Pathology Consultation.

The positive and negative controls are verified as showing appropriate immunoreactivity. If a control tissue is not included on the slide, a scanned image of the relevant quality control tissue is available upon request. Contact 855-516-8404.

Interpretation of this test should be performed in the context of the patient's clinical history and other diagnostic tests by a qualified pathologist.

**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. Hung YP, Fletcher CDM, and Hornick JL: [Evaluation of Pan-TRK Immunohistochemistry in Infantile Fibrosarcoma, Lipofibromatosis-like Neural Tumor, and Histologic Mimics. Histopathology 2018; doi: 10.1111/his.13666](#)
2. Davis JL, Lockwood CM, Albert CM et al: Infantile NTRK-associated Mesenchymal Tumors. *Pediatric and Developmental Pathology* 2018;21(1) 68-78
3. Drilon S, Laetsch TW, Kummar S et al: Efficacy of Larotrectinib in TRK Fusion-Positive Cancers in Adults and Children. *N Engl J Med* 2018;378:731-739
4. Hechtman JF, Benayed R, Hyman DM et al: Pan-Trk Immunohistochemistry is an Efficient and Reliable Screen for the Detection of NTRK Fusions. *Am J Surg Pathol* 2017;41(11):1547-1551
5. Agaram NP, Zhang L, Sung YS, et al: Recurrent NTRK1 gene fusions define a novel subset of locally aggressive Lipofibromatosis-like neural tumors. *Am J Surg Pathol* 2016;40:1407-1416

**Performance****Method Description**

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

**PDF Report**

No

**Day(s) Performed**

Monday through Friday

**Report Available**

1 to 3 days

**Specimen Retention Time**

Until staining is complete

**Performing Laboratory Location**

Rochester

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

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- 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 has been cleared, approved, or is exempt by the US Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

**CPT Code Information**

88342-TC, primary

88341-TC, if additional IHC

**LOINC® Information**

Test ID	Test Order Name	Order LOINC® Value
TRK	TRK IHC, Tech Only	Order only;no result

Result ID	Test Result Name	Result LOINC® Value
603301	TRK IHC, Tech Only	Bill only; no result