



# Test Definition: TTFSP

Thyroid Transcription Factor (SPT24)  
Immunostain, Technical Component Only

## Overview

### Useful For

Part of a panel of immunostains to identify the primary site for carcinomas of unknown origin

### 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 (IHC)

### NY State Available

Yes

## Specimen

### Specimen Type

TECHONLY

### Ordering Guidance

This test includes only technical performance of the stain; **no pathologist interpretation is provided.**

Technical component only stains **should not** be ordered with PATHC / Pathology Consultation. If ordered with PATHC, the technical component stains **will be canceled**. Any immunohistochemistry (IHC)/in situ hybridization (ISH) stain performed as a part of the PATHC will be performed at the reviewing pathologist's discretion at an additional charge.

### Shipping Instructions

Attach the green "Attention Pathology" address label (T498) 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)

# Test Definition: TTFSP

Thyroid Transcription Factor (SPT24)  
Immunostain, Technical Component Only

**Specimen Type:** Tissue

**Container/Tube:** Immunostains Technical Only Envelope

**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 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/pathology/digital-imaging/>
- 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/pathology/digital-imaging/#section3>

## 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
--	--------

## Specimen Stability Information

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

## Clinical & Interpretive

### Clinical Information

Thyroid transcription factor 1 (TTF1) is a nuclear protein expressed in thyroid follicular cells, type II pneumocytes, and a subset of bronchial cells. Given its relative specificity for cells of thyroid or lung origin, this immunostain is often included in a panel to identify the primary site for carcinomas of unknown origin.

**Interpretation**

This test does not include pathologist interpretation, only technical performance of the stain. If interpretation is required, order PATHC / Pathology Consultation for a full diagnostic evaluation or second opinion of the case.

The positive and negative controls are verified as showing appropriate immunoreactivity.

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. Bejarano PA, Nikiforov YE, Swenson ES, Biddinger PW. Thyroid transcription factor-1, thyroglobulin, cytokeratin 7, and cytokeratin 20 in thyroid neoplasms. *Appl Immunohistochem Mol Morphol*. 2000;8(3):189-194
2. Comperat E, Zhang F, Perrotin C, et al. Variable sensitivity and specificity of TTF-1 antibodies in lung metastatic adenocarcinoma of colorectal origin. *Mod Pathol*. 2005;18(10):1371-1376
3. Folpe AL, Gown AM, Lamps LW, et al. Thyroid transcription factor-1: immunohistochemical evaluation in pulmonary neuroendocrine tumors. *Mod Pathol*. 1999;12(1):5-8
4. Matoso A, Singh K, Jacob R, et al. Comparison of thyroid transcription factor-1 expression by 2 monoclonal antibodies in pulmonary and nonpulmonary primary tumors. *Appl Immunohistochem Mol Morphol*. 2010;18(2):142-149
5. Yatabe Y, Mitsudomi T, Takahashi T. TTF-1 expression in pulmonary adenocarcinomas. *Am J Surg Pathol*. 2002;26(6):767-773
6. Magaki S, Hojat SA, Wei B, So A, Yong WH. An introduction to the performance of immunohistochemistry. *Methods Mol Biol*. 2019;1897:289-298. doi:10.1007/978-1-4939-8935-5\_25

**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

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](#).

### 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
TTFSP	TTF1 (SPT24) IHC, Tech Only	Order only;no result

Result ID	Test Result Name	Result LOINC® Value
70888	TTF1 (SPT24) IHC, Tech Only	Bill only; no result