

Signal Transducer and Activator of Transcription 6 (STAT6), Technical Component
Only

Overview

#### **Useful For**

Aids in distinguishing solitary fibrous tumor from morphologic mimics

#### **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 performed). If diagnostic consultation by a pathologist is required order PATHC / Pathology Consultation.

# **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

Specimen Type: Tissue

**Supplies:** Immunostain Technical Only Envelope (T693) **Container/Tube:** Immunostain Technical Only Envelope



Signal Transducer and Activator of Transcription 6 (STAT6), Technical Component Only

#### **Preferred:**

-Formalin-fixed, paraffin-embedded tissue block

OR

-2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick **Acceptable**: None

# **Digital Image Access**

- 1. Information on accessing digital images of immunohistochemical (IHC) stains and the manual requisition form can be accessed through this website: <a href="https://news.mayocliniclabs.com/pathology/digital-imaging/">https://news.mayocliniclabs.com/pathology/digital-imaging/</a>
- 2. Clients ordering stains using a manual requisition form will not have access to digital images.
- 3. Clients wishing to access digital images must place the order for IHC stains electronically. Information regarding digital imaging can be accessed through this website: <a href="https://news.mayocliniclabs.com/pathology/digital-imaging/#section3">https://news.mayocliniclabs.com/pathology/digital-imaging/#section3</a>

#### **Forms**

If not ordering electronically, complete, print, and send a <u>Immunohistochemical (IHC)/In Situ Hybridization (ISH) Stains</u>
Request (T763) with the specimen.

# **Reject Due To**

Wet/frozen	Reject
tissue	
Cytology	
smears	
Nonformalin	
fixed tissue	
Nonparaffin	
embedded	
tissue	
Noncharged	
slides	
ProbeOn slides	
Snowcoat	
slides	

# **Specimen Stability Information**

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

# **Clinical & Interpretive**



Signal Transducer and Activator of Transcription 6 (STAT6), Technical Component Only

#### **Clinical Information**

Signal transducer and activator of transcription 6 (STAT6) is a signal transducer/transcription activator expressed in the cytoplasm of various normal tissues including bladder epithelium, bronchial epithelium, and epidermis. NAB2-STAT6 fusions have recently been described in the majority of solitary fibrous tumors, and lead to aberrant strong nuclear STAT6 staining.

# 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.

The charge of glass slides can be affected by environmental factors and subsequently may alter slide staining. Sending unsuitable glass slides can result in inconsistent staining due to poor slide surface chemistry.

Best practices for storage of positively charged slides:

- -Minimize time slides are stored after being unpackaged
- -Limit exposure to high humidity and heat
- -Minimize exposure to plastics

### **Clinical Reference**

- 1. Doyle LA, Vivero M, Fletcher CD, et al. Nuclear expression of STAT6 distinguishes solitary fibrous tumor from histologic mimics. Mod Pathol. 2014;27(3):390-395
- 2. Schweizer L, Koelsche C, Sahm F, et al. Meningeal hemangiopericytoma and solitary fibrous tumors carry the NAB2-STAT6 fusion and can be diagnosed by nuclear expression of STAT6 protein. Acta Neuropathol. 2013;125:651-658
- 3. Robinson DR, Wu YM, Kalyana-Sundaram S, et al. Identification of recurrent NAB2-STAT6 fusions in solitary fibrous tumor by integrative sequencing. Nat Genet. 2013;45(2):180-185
- 4. Chmielecki J, Crago AM, Rosenberg M, et al. Whole-exome sequencing identifies a recurrent NAB2-STAT6 fusion in solitary fibrous tumors. Nat Genet. 2013;45(2):131-132
- 5. 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**



Signal Transducer and Activator of Transcription 6 (STAT6), Technical Component
Only

# **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 <u>Test Prices</u> for detailed fee information.
- Clients without access to Test Prices can contact <u>Customer Service</u> 24 hours a day, seven days a week.
- Prospective clients should contact their account representative. For assistance, contact <u>Customer Service</u>.

#### **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
STAT6	STAT6 IHC, Tech Only	Order only;no result

Result ID	Test Result Name	Result LOINC® Value
70866	STAT6 IHC, Tech Only	Bill only; no result