

Histone H3 K36M Mutant (H3F3 K36M) Immunostain, Technical Component Only

### Overview

#### **Useful For**

Diagnosis of chondroblastoma

#### **Reflex Tests**

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

Mayo Clinic Laboratories has multiple histone immunostains available. See table for ordering guidance.

			Mayo Clinic
Test ID	Published name	Indication	slide label
HG34	Histone 3.3 G34W (H3F3A G34W)	Giant cell tumor of	H3 G34W
W	Immunostain, Technical Component Only	bone (GCTB)	
HK27M	Histone H3 K27M Mutant (H3 K27M)	K27M mutant	H3 K27M
	Immunostain, Technical Component Only	midline gliomas	
HISME	Histone H3 Trimethyl K27 (H3 K27me[3])	MPNST and K27M	H3 K27me3



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	Immunostain, Technical Component Only	mutant midline gliomas	
нкз6М	Histone H3 K36M Mutant (H3F3 K36M)	Chondroblastoma	H3 K36M
	Immunostain, Technical Component Only		

# **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

**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>
<u>Request</u> (T763) with the specimen.

### Reject Due To

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



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Snowcoat	
slides	

## **Specimen Stability Information**

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

# **Clinical & Interpretive**

#### **Clinical Information**

*H3F3B* is a member of the histone H3 family and is located on chromosome 17. Histone H3 K36M is expressed in the nuclei of the mononuclear cell population of *H3F3B* altered chondroblastoma.

### 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. Cleven A, Hocker S, Briaire-de Bruijn I, Szuhai K, Cleton-Jansen AM, Bovee JVMG. Mutation analysis of H3F3A and H3F3B as a diagnostic tool for giant cell tumor of bone and chondroblastoma. Am J Surg Pathol. 2015;39(11):1576-1583
- 2. Lu C, Jain S, Hoelper D, et al. Histone H3K36 mutations promote sarcomagenesis through altered histone methylation landscape. Science. 2016;352(6287):844-849
- 3. Chen W, DiFrancesco LM. Chondroblastoma: An update. Arch Pathol Lab Med. 2017;141(6):867-871
- 4. Amary MF, Berisha F, Mozela R, et al. The H3F3 K36M mutant antibody is a sensitive and specific marker for the



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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**

#### **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



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Test ID	Test Order Name	Order LOINC® Value
HK36M	Histone H3 K36M IHC, Tech Only	Order only;no result

Result ID	Test Result Name	Result LOINC® Value
604700	Histone H3 K36M IHC, Tech Only	Bill only; no result