

## 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.

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

# Test Definition: HK36M

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

|       |   |                        |         |
|-------|---|------------------------|---------|
|       | Immunostain, Technical Component Only                                       | mutant midline gliomas |         |
| HK36M | Histone H3 K36M Mutant (H3F3 K36M)<br>Immunostain, Technical Component Only | Chondroblastoma        | H3 K36M |

## 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

- 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<br>Cytology smears<br>Nonformalin fixed tissue<br>Nonparaffin embedded tissue<br>Noncharged slides<br>ProbeOn slides | Reject |
|--|--------|

|                 |  |
|-----------------|--|
| 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. If a control tissue is not included on the slide, a scanned image of the relevant quality control tissue is available upon request; call 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.

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, Suzhai 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

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- Amary MF, Berisha F, Mozela R, et al. The H3F3 K36M mutant antibody is a sensitive and specific marker for the diagnosis of chondroblastoma. *Histopathology*. 2016;69(2):121-127
  - 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

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 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

## Test Definition: HK36M

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

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### LOINC® Information

| 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 |