MAYO CLINIC LABORATORIES

Test Definition: HBZ

Human T-cell Lymphotropic Virus Type 1 (HTLV-1) bZIP Factor (HBZ), In Situ Hybridization, Technical Component Only

Overview

Useful For

Diagnosing adult T-cell leukemia/lymphoma

Reflex Tests

Test Id	Reporting Name	Available Separately	Always Performed
ISTOI	ISH Initial, Tech Only	No	No
ISTOA	ISH Additional, Tech Only	No	No

Testing Algorithm

For the initial technical component only in situ hybridization (ISH) stain performed, the appropriate bill only test ID will be reflexed and charged (ISTOI). For each additional technical component only ISH stain performed, an additional bill only test ID will be reflexed and charged (ISTOA).

Method Name

In Situ Hybridization (ISH)

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

Specimen Type: Tissue
Supplies: Immunostain Technical Only Envelope (T693)
Container/Tube: Immunostain Technical Only Envelope

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Preferred:
Formalin-fixed, paraffin-embedded tissue block
OR
4 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: https://news.mayocliniclabs.com/ihc-stains/
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: https://news.mayocliniclabs.com/ihc-stains/#FAQ

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 Snowcoat slides	Reject

Specimen Stability Information

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

Clinical & Interpretive

Clinical Information

Adult T-cell leukemia/lymphoma (ATLL) is a T-cell malignancy induced by human T-cell lymphotropic virus 1 (HTLV-1) infection. This test is intended to identify the presence of HTLV-1 in formalin-fixed, paraffin-embedded tissue, which may be useful in the diagnosis of ATLL.

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. Shimizu-Kohno K, Satou Y, Arakawa F, et al: Detection of HTLV-1 by means of HBZ gene in situ hybridization in formalin-fixed and paraffin-embedded tissues. Cancer Sci. 2011 Jul;102(7):1432-1436
2. Takatori M, Sakihama S, Miyara M, et al: A new diagnostic algorithm using biopsy specimens in adult T-cell leukemia/lymphoma: combination of RNA in situ hybridization and quantitative PCR for HTLV-1. Mod Pathol. 2021 Jan;34(1):51-58
3. Yamada K, Miyoshi H, Takeuchi M, et al: In situ hybridization of HBZ and Tax in FFPE samples from ATLL patients and its association with clinicopathological characteristics. Blood. 2018;132(Supplement 1):1643. doi: 10.1182/blood-2018-99-112082

Performance

Method Description

In situ hybridization 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 was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. It has not been cleared or approved by the US Food and Drug Administration.

CPT Code Information
88365-TC, Primary
88364-TC, if additional ISH

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
HBZ	HBZ ISH, Tech Only	No LOINC Needed

Result ID	Test Result Name	Result LOINC® Value
618482	HBZ ISH, Tech Only	No LOINC Needed