

Overview

Useful For

Assessing fibroblast growth factor-23 (FGF23) expression

Method Name

In Situ Hybridization (ISH)

NY State Available

Yes

Specimen

Specimen Type

Special

Additional Testing Requirements

If additional interpretation or analysis is needed, request PATHC / Pathology Consultation along with this test.

Shipping Instructions

Attach the green pathology address label included in the kit to the outside of the transport container.

Necessary Information

A pathology/diagnostic report and a brief history are required.

Specimen Required

Supplies: Pathology Packaging Kit (T554)

Specimen Type: Formalin-fixed, paraffin-embedded tissue block

Specimen Volume: Entire block

Specimen Type: Tissue slides

Slides: 5 Unstained glass, positively charged slides with 5 (+ or -1)-microns formalin-fixed, paraffin-embedded tissue

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	Reject
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Cytology smears Nonformalin fixed tissue Nonparaffin embedded tissue Noncharged slides ProbeOn slides	
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Specimen Stability Information

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

Clinical & Interpretive

Clinical Information

Fibroblast growth factor-23 (FGF23) is a phosphaturic hormone that acts on the proximal renal tubules to block phosphate reuptake. Production of FGF23 by a particular mesenchymal tumor, phosphaturic mesenchymal tumor, is responsible for the great majority of cases of tumor-induced osteomalacia.

Interpretation

This test, when not accompanied by a pathology consultation request, will be answered as either positive or negative. If additional interpretation or analysis is needed, request PATHC / Pathology Consultation along with this test.

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. Carter JM, Caron BL, Dogan A, Folpe AL. A novel chromogenic in situ hybridization assay for FGF23 mRNA in phosphaturic mesenchymal tumors. AM J Surg Pathol. 2015;39:(1)75-83

2. Bhattacharyya N, Chong WH, Gafni RI, Collins MT. Fibroblast growth factor 23: State of the field and future directions. Trends Endocrinol Metab. 2012;23(12):610-618

3. Graham RP, Hodge JC, Folpe AL, et al. A cytogenetic analysis of 2 cases of phosphaturic mesenchymal tumor of mixed connective tissue type. Hum Pathol. 2012;43(8):1334-1338

4. Graham R, Krishnamurthy S, Oliveira A, Inwards C, Folpe AL. Frequent expression of fibroblast growth factor-23 (FGF23) mRNA in aneurysmal bone cysts and chondromyxoid fibromas. J Clin Pathol. 2012;65(10):907-909

5. Bahrami A, Weiss SW, Montgomery E, et al. RT-PCR analysis for FGF23 using paraffin sections in the diagnosis of phosphaturic mesenchymal tumors with and without known tumor induced osteomalacia. Am J Surg Pathol.

2009;33(9):1348-1354
6. Folpe AL, Fanburg-Smith JC, Billings SD, et al. Most osteomalacia-associated mesenchymal tumors are a single histopathologic entity-an analysis of 32 cases and a comprehensive review of the literature. Am J Surg Pathol. 2004;28(1):1-30

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

5 to 8 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

88365-Primary

LOINC® Information

Test Definition: 23FBG

Fibroblast Growth Factor-23 (FGF23), In Situ
Hybridization

Test ID	Test Order Name	Order LOINC® Value
23FBG	Fibroblast Growth Factor-23, ISH	104259-7

Result ID	Test Result Name	Result LOINC® Value
620250	Interpretation	50595-8
620251	Participated in the Interpretation	No LOINC Needed
620252	Report electronically signed by	19139-5
620253	Material Received	81178-6
620254	Disclaimer	62364-5
620255	Case Number	80398-1