
Overview

Useful For

Detection of human papillomavirus for both low-risk (6, 11) and high-risk (16, 18, 26, 31, 33, 35, 39, 45, 51, 52, 53, 56, 58, 59, 66, 68, 73, and 82) genotypes

Testing Algorithm

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: Slides

Slides: 6 unstained glass, positively charged slides with 5 (+ or - 1)-microns formalin-fixed, paraffin-embedded tissue

Forms

If not ordering electronically, complete, print, and send 1 of the following forms with the specimen:

[-Oncology Test Request \(T729\)](#)

[-Immunohistochemical \(IHC\)/In Situ Hybridization \(ISH\) Stains Request \(T763\)](#)

Reject Due To

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

Specimen Stability Information

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

Clinical & Interpretive

Clinical Information

Human papillomavirus (HPV) infections with low-risk genotypes (6, 11) can cause benign hyperplasia such as condylomas and papillomas. Persistent infections with high-risk genotypes (16, 18, 26, 31, 33, 35, 39, 45, 51, 52, 53, 56, 58, 59, 66, 68, 73, and 82) are associated with cervical, vaginal, vulvar, and head and neck malignancies. Patients with HPV-related oropharyngeal squamous cell carcinoma (OPSCC) have shown better disease-specific survival and overall survival when compared to HPV-negative cases of OPSCC.

Reference Values

Results are reported as positive or negative for types 6 and 11 (low risk), and 16, 18, 26, 31, 33, 35, 39, 51, 52, 53, 56, 58, 59, 66, 68, 73, and 82 (high risk).

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 staining quality. Stability thresholds vary widely among published literature. Best practice is for paraffin sections to be cut within 6 weeks.

Clinical Reference

1. Belobrov S, Cornall A, Young R, et al: The role of human papillomavirus in p16-positive oral cancers. J Oral Pathol Med. 2018 Jan;47(1):18-24
2. Ducatman B: The role of human papillomavirus in oropharyngeal squamous cell carcinoma. Arch Pathol Lab Med. 2018 Jun;142(6):715-718
3. Windon M, D'Souza G, Rettig E, et al: Increasing prevalence of human papillomavirus–positive oropharyngeal cancers among older adults. Cancer. 2018 Jul;124(14):2993-2999

Performance**Method Description**

In situ hybridization on sections of paraffin-embedded tissue.(Unpublished Mayo method)

PDF Report

No

Specimen Retention Time

Until staining is complete.

Performing Laboratory Location

Rochester

Fees & Codes**Test Classification**

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

CPT Code Information

[88365-Primary](#)

88364-If additional ISH

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
HPVHL	HPV High/Low Risk ISH	In Process

Result ID	Reporting Name	LOINC®
71199	Interpretation	50595-8
71200	Participated in the Interpretation	No LOINC Needed
71203	Material Received	81178-6
71594	Disclaimer	62364-5
72112	Case Number	80398-1
71201	Report electronically signed by	19139-5