

## Overview

### Useful For

Aiding in subtyping intraductal papillary mucinous neoplasms (IPMN).

### Reflex Tests

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

### Method Name

Immunohistochemistry

### NY State Available

Yes

## Specimen

### Specimen Type

TECHONLY

### Advisory Information

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 Immunostains Technical Only label included in the kit to the outside of the transport container.

### Specimen Required

**Supplies:** Immunostain Technical Only Envelope (T693)

**Specimen Type:** Tissue

**Container/Tube:** Immunostains Technical Only Envelope

**Preferred:** 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick.

**Acceptable:** Formalin-fixed, paraffin-embedded (FFPE) tissue block

### Digital Image Access

1. Information on accessing digital images of immunohistochemical (IHC) stains and the manual requisition form can be accessed through this website: [www.mayocliniclabs.com/test-info/ihc/index.html](http://www.mayocliniclabs.com/test-info/ihc/index.html)

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: [www.mayocliniclabs.com/test-info/ihc/faq.html](http://www.mayocliniclabs.com/test-info/ihc/faq.html)

### Forms

If not ordering electronically, complete, print, and send an [Immunohistochemical \(IHC\)/In Situ Hybridization \(ISH\) Stains Request](#) (T763) with the specimen.

### Reject Due To

Tissue/Other	Wet/frozen tissue Cytology smears Non formalin fixed tissue Nonparaffin embedded tissue Non charged slides ProbeOn slides
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### Specimen Stability Information

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

## Clinical and Interpretive

### Clinical Information

Mucins are high molecular weight glycoproteins produced by epithelial cells and can be divided into 2 families. Mucin 2 (MUC2) is a 520 kDa glycoprotein belonging to the family of secretory mucins and is normally expressed in the cytoplasm of goblet cells. An immunopanel consisting of MUC1, MUC2, MUC5AC and MUC6 is useful in subtyping intraductal papillary mucinous neoplasms (IPMN).

### Interpretation

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; contact 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 fresh.

### Clinical Reference

- Lau S, Weiss L, Chu P: Differential expression of MUC1, MUC2, and MUC5AC in carcinomas of various sites. *Am J Clin Pathol* 2004;122:61-69
- Pezhouh M, Park J: Gastric pyloric gland adenoma. *Arch Pathol Lab Med* 2015;139:823-826
- Kwak H, Liu X, Allende D, et al: Interobserver variability in intraductal papillary mucinous neoplasm subtypes and application of their mucin immunoprofiles. *Modern Pathology* 2016;29:977-984

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- Kim D, Shin N, Kim G, et al: Mucin expression in gastric cancer. Arch Pathol Lab Med 2013;137:1047-1053
  - Castellano-Megias V, Ibarrola-de Andres C, Lopez-Alonso G, et al: Pathological features and diagnosis of intraductal papillary mucinous neoplasm of the pancreas. World J Gastrointest Oncol 2014;6(9):311-324
  - Horinouchi M, Nagata K, Nakamura A, et al: Expression of different glycoforms of membrane mucin (MUC1) and secretory mucin (MUC2, MUC5AC and MUC6) in pancreatic neoplasms. Acta Histochem Cytochem 2003;36(5):443-453

## Performance

### Method Description

Immunohistochemistry on sections of paraffin-embedded tissue.(Unpublished Mayo method)

### PDF Report

No

### Day(s) and Time(s) Test Performed

Monday through Friday

### Analytic Time

1 day

### Maximum Laboratory Time

3 days

### Specimen Retention Time

Until staining is complete

### Performing Laboratory Location

Rochester

## Fees and 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 Regional Manager. 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. This test has not been cleared or approved by the U.S. Food and Drug Administration.

### 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
MUCN2	Mucin 2 IHC, Tech Only	Order only;no result

Result ID	Test Result Name	Result LOINC Value
605117	Mucin 2 IHC, Tech Only	Bill only; no result