

## Overview

### Useful For

Identification of aberrant nuclear staining pattern observed in some tumors

### Reflex Tests

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

### 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: TissueSupplies: Immunostain Technical Only Envelope (T693)Container/Tube: Immunostain Technical Only EnvelopePreferred:-Formalin-fixed, paraffin-embedded tissue blockOR-2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thickAcceptable: 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.

## Specimen Minimum Volume

See Specimen Required

## 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

Beta-catenin is involved in cellular cohesion through binding to the cytoplasmic tail of epithelial cadherin and in intracellular signaling as a component of the Wnt pathway. In normal cells, beta-catenin levels are regulated by the adenomatous polyposis coli (APC) protein, which promotes normal degradation of the protein. Alterations in either beta-catenin or APC can result in accumulation of the protein and abnormal localization in the nucleus. In the nucleus, beta-catenin acts as a cofactor in the upregulation of oncogenes including cyclin D1 and cmyc. In normal tissues, staining for beta-catenin is limited to the membrane. Aberrant nuclear staining can be used diagnostically in selected tumors of the soft tissue (fibromatoses, endometrial stromal sarcoma), pancreas, liver, and lung.

### 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 and documentation is retained at Mayo Clinic Rochester. 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

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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. Klymkowsky MW. Beta-catenin and its regulatory network. *Hum Pathol.* 2005;36(3):225-2272. Bell DA. Origins and molecular pathology of ovarian cancer. *Mod Pathol.* 2005;18(Suppl 2):S19-323. Smith ME, Pignatelli M. The molecular histology of neoplasia: the role of the cadherin/catenin complex. *Histopathology.* 1997;31(2):107-1114. 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****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.

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**CPT Code Information**

88342-TC, primary 88341-TC, if additional IHC

**LOINC® Information**

Test ID	Test Order Name	Order LOINC® Value
BCATN	B-Catenin IHC, Tech Only	Order only; no result

Result ID	Test Result Name	Result LOINC® Value
70674	B-Catenin IHC, Tech Only	Bill only; no result