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**Overview****Useful For**

Identification of breast and urinary cancer, among others

**Method Name**

Immunohistochemistry (IHC)

**NY State Available**

Yes

**Specimen****Specimen Type**

Special

**Shipping Instructions**

Attach the green "Attention Pathology" address label (T498) to the outside of the transport container before putting into the courier mailer.

**Necessary Information**

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

**Specimen Required**

**Specimen Type:** Tissue

**Supplies:** Pathology Packaging Kit (T554)

**Submit:**

Formalin-fixed, paraffin-embedded tissue block

OR

3 Unstained glass, "positively charged" slides with 4-microns formalin-fixed, paraffin-embedded tissue

**Additional Information:** One slide will be stained with hematoxylin and eosin and returned.

**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**

Decalcified	Reject
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paraffin embedded tissue	
Wet/frozen tissue	Reject
Cytology smears	Reject
Nonformalin fixed tissue including alcohol-formalin-acetic acid (AFA), 95% ethanol, PREFER fixatives or zinc formalin	Reject
Nonparaffin embedded tissue	Reject
Noncharged slides	Reject
ProbeOn slides	Reject
Snowcoat slides	Reject

## Specimen Stability Information

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

## Clinical & Interpretive

### Clinical Information

Trophoblast antigen 2 (TROP2) is overexpressed in many tissues and cancers, including breast and urinary cancer among others. An antibody drug conjugate, sacituzumab govitecan, targets the cell surface protein TROP2. Tumors with high expression of TROP2 are more likely to respond to targeted drug therapy.

### Reference Values

An interpretive report will be provided.

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**Interpretation**

Trophoblast antigen 2 is a membrane protein and immunohistochemical positivity is characterized by a membrane pattern of staining. Results are reported as percent positive cells and intensity of staining.

This result should be interpreted in the appropriate clinical context.

**Cautions**

This test has been validated for non-decalcified paraffin-embedded tissue specimens fixed in 10% neutral buffered formalin at Mayo Clinic in Rochester, Minnesota. Specimens are recommended to be placed in formalin within 1 hour of acquisition and fixed between 6 hours and 72 hours. This assay has not been validated on tissue or cellblocks subjected to alternative fixatives or decalcification.

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. Shvartsu A, Bonavida B. Trop2 and its overexpression in cancers: regulation and clinical/therapeutic implications. *Genes Cancer*. 2015;6(3-4):84-105
2. Bardia A, Mayer I, Diamond J, et al. Efficacy and safety of anti-Trop-2 antibody drug conjugate sacituzumab govitecan (IMMU-132) in heavily pretreated patients with metastatic triple-negative breast cancer. *J Clin Oncol*. 2017;35:2141-2148
3. Lenart S, Lenart P, Smarda J, Remsik J, Souce K, Benes P. Trop2: Jack of all trades, master of none. *Cancers*. (Basel). 2020;12(11):3328. doi:10.3390/cancers12113328

**Performance****Method Description**

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

**PDF Report**

No

**Day(s) Performed**

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Monday through Friday

**Report Available**

5 to 7 days

**Specimen Retention Time**

Until reported

**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**

88360

**LOINC® Information**

Test ID	Test Order Name	Order LOINC® Value
TROP2	TROP2, SemiQuant IHC, Manual	105178-8

Result ID	Test Result Name	Result LOINC® Value
621065	Interpretation	59465-5
621624	Participated in the Interpretation	No LOINC Needed
621625	Report electronically signed by	19139-5
621626	Material Received	81178-6
621627	Disclaimer	62364-5
621628	Case Number	80398-1