

## Overview

### Useful For

Identification of erythrocytes in various normal and neoplastic tissues

### 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).

### Reflex Tests

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

### 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

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

**Specimen Type:** Tissue

**Container/Tube:** Immunostain 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 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.

### 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 |
|---------------|---------------------|------|-------------------|
| TECHONLY      | Ambient (preferred) |      |                   |
|               | Refrigerated        |      |                   |

## Clinical & Interpretive

### Clinical Information

Glucose transporter 1 (GLUT-1) is an ubiquitous facilitative membrane glucose transporter that is activated by hypoxia-sensing cellular pathways and may sustain cellular metabolism via glycolysis when hypoxia is present. It is expressed at high levels on erythrocytes, the endothelium of the blood-brain barrier, and the perineurium. Various carcinomas may show overexpression, including fallopian tube carcinomas.

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**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**

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. Zhou JC, Zhang JJ, Zhang W, Ke ZY, Ma LG, Liu M: Expression of GLUT-1 in nasopharyngeal carcinoma and its clinical significance. *Eur Rev Med Pharmacol Sci.* 2017 Nov;21(21):4891-4895
2. Berlth F, Monig S, Pinther B, et al: Both GLUT-1 and GLUT-14 are independent prognostic factors in gastric adenocarcinoma. *Ann Surg Oncol.* 2015 Dec;22 Suppl 3:S822-31. doi: 10.1245/s10434-015-4730-x
3. Abdou AG, Eldien MM, Elsakka D: GLUT-1 expression in cutaneous basal and squamous cell carcinomas. *Int J Surg Pathol.* 2015 Sep;23(6):447-453. doi: 10.1177/1066896915589968

**Performance****Method Description**

Immunohistochemistry on sections of paraffin-embedded tissue.(Unpublished Mayo method)

**PDF Report**

No

**Specimen Retention Time**

Until staining is complete.

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**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.

**CPT Code Information**

88342-TC, primary

88341-TC, if additional IHC

**LOINC® Information**

| Test ID | Test Order Name       | Order LOINC Value    |
|---------|-----------------------|----------------------|
| GLUT    | GLUT-1 IHC, Tech Only | Order only;no result |

  

| Result ID | Reporting Name        | LOINC®               |
|-----------|-----------------------|----------------------|
| 70759     | GLUT-1 IHC, Tech Only | Bill only; no result |