Overview

Useful For
Detection of estrogen receptor-beta 1 protein levels in cancer, including triple-negative breast cancer

Reflex Tests

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Reporting Name</th>
<th>Available Separately</th>
<th>Always Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>IHTOI</td>
<td>IHC Initial, Tech Only</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>IHTOA</td>
<td>IHC Additional, Tech Only</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

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 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 (T693)

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

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

**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**

<table>
<thead>
<tr>
<th>Tissue/Other</th>
<th>Wet/frozen tissue Cytology smears Nonformalin fixed tissue Nonparaffin embedded tissue Noncharged slides ProbeOn slides</th>
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</thead>
</table>

**Specimen Stability Information**

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
</tr>
</thead>
<tbody>
<tr>
<td>TECHONLY</td>
<td>Ambient (preferred)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrigerated</td>
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</table>

**Clinical and Interpretive**

**Clinical Information**

This test is intended to identify the presence of estrogen receptor beta 1 (ER-beta 1) protein. ER-beta 1 is a member of the nuclear receptor superfamily of transcription factors and is the product of the *ESR2* gene on chromosome 14q22-24. Unlike ER-alpha, ER-beta 1 is highly expressed in normal breast epithelium but expression is reduced in many precancerous and cancerous breast tumors. ER-beta 1 is expressed in 30% to 40% of triple negative breast cancers and is associated with improved outcomes in ER-alpha positive tamoxifen treated patients.

**Interpretation**

This test includes only technical performance of the stain (no pathologist interpretation is performed). Mayo Clinic cannot provide an interpretation of tech only stains outside the context of a pathology consultation. If an interpretation is needed, refer to PATHC / Pathology Consultation for a full diagnostic evaluation or second opinion of the case. All material associated with the case is required. Additional specific stains may be requested as part of the pathology consultation, and will be performed as necessary at the discretion of the Mayo pathologist.

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. 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**

No significant cautionary statements

**Clinical Reference**


5. Marotti J, Collins L, Hu R: Estrogen Receptor-Beta Expression in Invasive Breast Cancer in Relation to Molecular Phenotype: Results From the Nurses’ Health Study. Modern Pathology 2010; 23,197-204

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

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Test Order Name</th>
<th>Order LOINC Value</th>
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<td>Estrogen Rec Beta1 IHC, Tech Only</td>
<td>Order only; no result</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Result ID</th>
<th>Test Result Name</th>
<th>Result LOINC Value</th>
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</thead>
<tbody>
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<td>71492</td>
<td>Estrogen Rec Beta1 IHC, Tech Only</td>
<td>Bill only; no result</td>
</tr>
</tbody>
</table>