

Overview

Useful For

Aids in the identification of succinate dehydrogenase B (SDHB) deficient tumors

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

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

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

Tissue/Other Wet/frozen tissue
 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

Succinate dehydrogenase B (SDHB) protein is an integral part of the complex II oxidation/reduction pathway. Its function is to transfer electrons from succinate to CoQ. De novo and inheritable mutations in this gene result in paragangliomas and pheochromocytomas. SDHB can be used to differentiate between type 1 (SDHB +) and type 2 (SDHB -) gastrointestinal stromal tumors (GIST). SDHB-deficient GISTs do not respond to imatinib. The cellular localization for SDHB is cytoplasmic and staining is granular (localized to mitochondria). Endothelial cells often stain positive for SDHB and can be used as an internal control when testing GIST tumors.

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

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. Gill AJ, Benn DE, Chou A, et al: Immunohistochemistry for SDHB triages genetic testing of SDHB, SDHC, and SDHD in paraganglioma-pheochromocytoma syndromes. Hum Pathol 2010 Jun;41\(6\):805-814](#)
2. Zhang L, Smyrk TC, Young WF Jr, et al: Gastric stromal tumors in Carney triad are different clinically, pathologically, and behaviorally from sporadic gastric gastrointestinal stromal tumors: findings in 104 cases. Am J Surg Pathol 2010 Jan;34(1):53-64
3. van Nederveen FH, Gaal J, Favier J, et al: An immunohistochemical procedure to detect patients with paraganglioma and pheochromocytoma with germline SDHB, SDHC, or SDHD gene mutations: a retrospective and prospective analysis. Lancet Oncol 2009 Aug;10(8):764-771

Performance**Method Description**

Immunohistochemistry on sections of paraffin-embedded tissue.(Unpublished Mayo method)

PDF Report

No

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.

CPT Code Information

88342-TC, primary

88341-TC, if additional IHC

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
SDHB	SDHB IHC, Tech Only	Order only;no result

Result ID	Reporting Name	LOINC®
70862	SDHB IHC, Tech Only	Bill only; no result