Test Definition: SEMA3

Semaphorin 3B (SEMA3B) Immunostain, Technical Component Only

Overview

Useful For
Aiding in the diagnosis of semaphorin 3B-associated membranous nephropathy

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 provided**.

Technical component only stains **should not** be ordered with PATHC / Pathology Consultation. If ordered with PATHC, the technical component stains **will be canceled**. Any immunohistochemistry (IHC)/in situ hybridization (ISH) stain performed as a part of the PATHC will be performed at the reviewing pathologist's discretion at an additional charge.

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: Tissue
Supplies: Immunostain Technical Only Envelope (T693)
Container/Tube: Immunostain Technical Only Envelope
Submit:
-Formalin-fixed, paraffin-embedded tissue block
OR
-2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick

Additional Information: Broken or cracked unstained slides will be rejected. Stained slides that were broken and repaired (ie, double mounted) at the client site will not be rejected, as, in most cases, they can still be reviewed under the microscope. However, due to the double mounting, digital scanning cannot be performed.

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 1 of the following forms with the specimen.
-Immunohistochemical (IHC)/In Situ Hybridization (ISH) Stains Request (T763)
-Renal Diagnostics Test Request (T830)
-Kidney Transplant Test Request

Reject Due To

Wet/frozen tissue	Reject
Cytology smears	Reject
Nonformalin fixed tissue	Reject
Nonparaffin embedded tissue	Reject
Noncharged slides	Reject
ProbeOn slides	Reject
Snowcoat slides	Reject
Broken or cracked unstained slides	Reject
Broken or cracked stained slides that cannot be repaired	Reject

Specimen Stability Information

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

Clinical & Interpretive

Clinical Information

Primary membranous nephropathy (MN) is an autoimmune disease of the kidney where antibodies target an antigen in the glomerular basement membrane resulting in kidney damage or failure. In up to 75% of primary membranous nephropathy cases PLA2R (phospholipase A2 receptor) and THSD7A (thrombospondin type-1 domain-containing 7A) are the target antigens. SEMA3B (semaphorin 3B)-associated MN is a very rare disease that accounts for only 1% to 3% of all MN specimens. SEMA3B-associated MN is observed mostly in pediatric patients and young adults.

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.

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

Broken or cracked unstained slides are not compatible with the instrumentation used in our performing laboratories and will be rejected. Additional material may be requested.

Attempts will be made to repair broken or cracked stained slides; however, if they are unable to be repaired (ie, shattered in transit), they will be rejected and discarded due to safety concerns.

Clinical Reference

1. Sethi S, Debiec H, Madden B, et al: Semaphorin 3B-associated membranous nephropathy is a distinct type of disease predominantly present in pediatric patients. Kidney Int. 2020 Nov;98(5):1253-1264
2. Sethi S: Membranous nephropathy: a single disease or a pattern of injury resulting from different diseases. Clin Kidney J. 2021 Mar 26;14(10):2166-2169
3. Sethi S: New 'antigens' in membranous nephropathy. J Am Soc Nephrol. 2021 Feb;32(2):268-278

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
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 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

Test Definition: SEMA3

Semaphorin 3B (SEMA3B) Immunostain, Technical Component Only

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
SEMA3	SEMA3B IHC, Tech Only	Order only;no result

Result ID	Test Result Name	Result LOINC® Value
617056	SEMA3B IHC, Tech Only	Bill only; no result