MAYO CLINIC LABORATORIES

TEST OBSOLETE

Notification Date: April 22, 2025
Effective Date: May 22, 2025

VDRL, Spinal Fluid

Test ID: VDSF

Explanation:
VDRL, Spinal Fluid will be discontinued and be replaced with Neurosyphilis IgG Antibody Index with VDRL, Serum and Spinal Fluid. The new method is preferred over the classic VDRL assay for the following reasons:

1. The new method assess for *T. pallidum*-specific antibodies, rather than the non-treponemal antibodies that are detected by the VDRL method
2. The new method assess for intrathecally synthesized *T. pallidum* antibodies in the CSF (ie, the method corrects for any passive diffusion of antibodies from serum into the CSF).

Recommended Alternative Test:

Neurosyphilis IgG Antibody Index with VDRL, Serum and Spinal Fluid

Test ID: NSAIP

Useful for:
Aid in the diagnosis of neuroinvasive syphilis

Profile Information:

Test ID	Reporting Name	Available Separately	Always Performed
NSCSF	Neurosyphilis IgG Screen, CSF	No	Yes
NSSER	Neurosyphilis IgG, S	No	No

Reflex Tests:

Test ID	Reporting Name	Available Separately	Always Performed
NSAI	Neurosyphilis IgG, Ab Index	No	No
VDSFT	VDRL Titer, CSF	No	No

Testing Algorithm:
Testing begins with syphilis IgG screening of the spinal fluid (CSF) specimen. If the screen is negative, no additional testing will be performed.

If the CSF screen is reactive, the paired CSF and serum specimens will be used to establish the antibody index. To do this, the paired serum and CSF samples (collected within 24 hours of each other) are tested on the same run using quantitative assays to determine levels for the following analytes:

1. Anti-*Treponema pallidum* IgG in CSF and serum
2. Total IgG in CSF and serum
3. Albumin in CSF and serum

These additional tests are necessary to normalize the level of anti-*Treponema pallidum* antibodies to total IgG and albumin in the CSF and establish the antibody index ratio of anti-*T. pallidum* antibodies in CSF-to-serum. This testing is performed at an additional charge.

Samples that result as Syphilis Antibody Index negative do not undergo additional testing.

Samples that result as Syphilis Antibody Index positive or equivocal will be reflexed for VDRL testing to establish a semi-quantitative titer.

Methods:

NSCSF, NSAI: Enzyme-Linked Immunosorbent Assay (ELISA)
NSSER: Technical Interpretation
VDSFT: Flocculation/Agglutination

Reference Values:

NEUROSYPHILIS SCREEN, IgG, SPINAL FLUID:
Negative

NEUROSYPHILIS IgG ANTIBODY INDEX:
Antibody Index: 0.6-1.2

VDRL TITER, SPINAL FLUID:
Negative

Reference values apply to all ages.

Specimen Requirements:

Both spinal fluid (CSF) and serum are required for this test. CSF and serum must be collected within a maximum of 24 hours of each other.

Specimen Type:	Spinal fluid
Container/Tube:	Sterile vial
Specimen Volume:	2.2 mL
Collection Instructions:	1. The spinal fluid (CSF) specimen **must be** collected within 24 hours of the serum specimen, preferably at the same time. 2. The CSF aliquot should be from the second, third, or fourth CSF vial collected during the lumbar puncture. **Do not submit CSF from the first vial due to the possibility of blood contamination, which will cause specimen rejection**. 3. Label vial as spinal fluid or CSF. 4. Band CSF specimen together with the serum sample.
	1.5 mL
Specimen Type:	Serum

Submission Container/Tube:	Plastic vial
Preferred:	Serum gel
Acceptable:	Red top
Specimen Volume:	2.2 mL
Collection Instructions:	1. Within 24 hours of collection of the spinal fluid specimen, a serum specimen **must also be** collected, preferably at the same time. 2. Centrifuge and aliquot serum into a plastic vial. 3. Label tube as serum. 4. Band serum specimen together with the CSF sample.
Minimum Volume:	1.5 mL

Specimen Stability Information:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	10 days
	Frozen	10 days
Serum	Refrigerated (preferred)	10 days
	Frozen	10 days

Cautions:

- A single negative result should not be used to exclude the diagnosis of neuroinvasive syphilis disease in a patient with appropriate exposure history and symptoms suggestive of infection.
- False-negative results may be acquired in patients tested soon after infection, prior to the development of a detectable level of antibodies in the spinal fluid.
- False-reactive results may occur in patients with *Borrelia* or *Leptospira* infections. Patient management decisions should not be made on a single reactive result.
- Antibody index can remain positive for a prolonged period of time after complete resolution of disease. Therefore, a positive result must be interpreted in light of current, presenting symptoms.

CPT Code: 86780

Day(s) Performed: Monday through Sunday **Report Available:** 2 to 4 days

Questions

Contact Dunisha Messmer, Laboratory Resource Coordinator at 800-533-1710.