

TEST UPDATE

Neurosyphilis IgG Antibody Index with VDRL, Serum and CSF

UVMMC

Effective 5/22/25, Neurosyphilis IgG Antibody Index with VDRL, Serum and CSF (Mayo NSAIP) will replace VDRL, CSF (Mayo VDSF) in aiding in the diagnosis of neuroinvasive syphilis. The new method (ELISA) is preferred over the classic VDRL assay (Flocculation/Agglutination) for the following reasons:

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

New Testing Algorithm:

Testing begins with syphilis IgG screening of the 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.

Test Build Information:

New Orderable	Epic Code	Atlas Code	Mayo Test ID	Order LOINC	CPT Code(s)
Neurosyphilis IgG Ab Index with VDRL, Serum and CSF	LAB17801	LAB17801	NSAIP	in process	86780
Result Component(s):	Epic Code	Atlas Code	Mayo Test ID	Result LOINC	Notes
Neurosyphilis IgG, CSF	12301020830	MNSY1	NSY1	58031-6	
Neurosyphilis IgG Interp	12301020831	MNSY2	NSY2	69048-7	
Neurosyphilis IgG, S.	12301020832	MNSSER	NSSER	69048-7	
Specimen Requirements:					
Container	Specimen	Temperature	Collect Vol	Submit Vol	Stability
Sterile Container	CSF	Refrigerated	2.2 mL	2.2 mL	10 days
SST	Serum	Refrigerated	4 mL	2.2 mL	10 days

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Test Build Information (cont.):

Collection Information:
Both CSF and serum are REQUIRED. CSF and serum must be collected within a maximum of 24 hours of each other.
CSF Collection Instructions:
1. The 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 during lumbar puncture. Do not submit CSF from the first vial due to the possibility of blood contamination, which can cause specimen rejection.
3. Label vial as CSF.
4. Band CSF specimen together with the serum sample.
Serum Collection Instructions:
1. Within 24 hours of collection of the CSF specimen, a serum specimen must also be collected.
2. Centrifuge and aliquot serum into plastic vial.
3. Label tube as serum.
4. Band serum specimen together with the CSF sample.
Min Volumes: CSF = 1.5 mL; Serum = 1.5 mL

New Reflex-Only Test (not orderable)	Epic Code	Atlas Code	Mayo Test ID	Order LOINC	CPT Code(s)
VDRL Titer, CSF	LAB17803	LAB17803	VDSFT	31146-4	86593
Result Component(s):	Epic Code	Atlas Code	Mayo Test ID	Result LOINC	Notes
VDRL Titer, CSF	12301020835	M621959	621959	31146-4	
Specimen Requirements:					
N/A - Sample will be at Mayo.					

New Reflex-Only Test (not orderable)	Epic Code	Atlas Code	Mayo Test ID	Order LOINC	CPT Code(s)
Neurosypilis IgG, Ab Index	LAB17802	LAB17802	NSAI	in process	*
Result Component(s):	Epic Code	Atlas Code	Mayo Test ID	Result LOINC	Notes
Neurosypilis IgG Ab Index Value	12301020833	MNSY3	NSY3	105193-7	
Neurosypilis IgG Ab Index Interp	12301020834	MNSY4	NSY4	69048-7	
Specimen Requirements:					
N/A - Sample will be at Mayo					

*CPT Codes: 82784x2, 82040, 86780x2, 82042

Orders to be Discontinued	Epic Code	Atlas Code	Mayo Test ID
VDRL, CSF	LAB2343	MVDRL	VDSF
VDRL Titer, CSF (Reflex-only)	LAB3992	VDRLT	VDSFQ

For questions regarding this change, contact UVMMC Lab Outreach at laboutreach@uvmhealth.org.

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