

TEST UPDATE

Neurosyphilis IgG Antibody Index with VDRL, Serum and CSF UVMHC

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.):

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| 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) |
|--|-------------|------------|--------------|--------------|-------------|
| Neurosyphilis IgG, Ab Index | LAB17802 | LAB17802 | NSAI | in process | * |
| Result Component(s): | Epic Code | Atlas Code | Mayo Test ID | Result LOINC | Notes |
| Neurosyphilis IgG Ab Index Value | 12301020833 | MNSY3 | NSY3 | 105193-7 | |
| Neurosyphilis 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 UVMHC Lab Outreach at laboutreach@uvmhealth.org.

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