

Overview

Useful For

Ruling out a diagnosis of narcolepsy

Method Name

Polymerase Chain Reaction (PCR)/Sequence-Specific Oligonucleotide Probes (SSO)

NY State Available

Yes

Specimen

Specimen Type

Whole Blood ACD-B

Specimen Required

Container/Tube: Yellow top (ACD solution B)

Specimen Volume: 6 mL

Collection Instructions: Do not transfer blood to other containers.

Additional Information: Specimen acceptability is based on extracted DNA concentration and not sample age.

Specimen Minimum Volume

3 mL

Reject Due To

All specimens will be evaluated at Mayo Clinic Laboratories for test suitability.

Specimen Stability Information

| Specimen Type | Temperature | Time | Special Container |
|-------------------|--------------------------|------|-------------------|
| Whole Blood ACD-B | Refrigerated (preferred) | | |
| | Ambient | | |

Clinical and Interpretive

Clinical Information

Narcolepsy is a neurological condition affecting about 0.02% of African American, Caucasian, and Japanese individuals. It is characterized by excessive daytime somnolence and abnormal rapid eye movement (REM) sleep. Cataplexy (weakness precipitated by emotions, especially laughter) is present in 64% to 79% of patients with narcolepsy.

Studies have identified *DQB1*06:02* as a useful marker of narcolepsy. *DQB1*06:02* is found in 90% to 95% of

African American, Caucasian, and Japanese patients with narcolepsy who also have cataplexy (narcolepsy type 1), but only in 45% to 50% of patients with narcolepsy without cataplexy (narcolepsy type 2). It must also be clearly understood that about 25% of normal people have this gene.

Because *DQB1*06:02* is present in the normal population, no test for an *HLA* gene constitutes a test for narcolepsy. A more reliable approach would be to consider that, in an appropriate patient who has cataplexy, the absence of the strongly associated *DQB1*06:02*, provides good evidence that the patient does **not** have narcolepsy. However, its absence does not rule-out narcolepsy without cataplexy (narcolepsy type 2).

Reference Values

An interpretive report will be provided.

Interpretation

If *DQB1*06:02* is not detected, the narcolepsy-associated antigen test result will be reported as negative for *DQB1*06:02*.

If the allele is detected, the result will be reported as positive for *DQB1*06:02*.

Cautions

No significant cautionary statements

Clinical Reference

1. Mignot E, Lin X, Arrigoni J, et al: *DQB1*0602* and *DQB1*0102* (DQ1) are better markers than DR2 for narcolepsy in Caucasian and Black Americans. *Sleep* 1994;17:S60-67
2. Chabas D, Taheri S, Renier C, Mignot E: The genetics of narcolepsy. *Ann Rev Genomics Hum Genet* 2003;4:459-483
3. Andlauer O, Moore H 4th, Hong SC, et al: Predictors of hypocretin (orexin) deficiency in narcolepsy without cataplexy *Sleep* 2012 Sep 1;35(9):1247-1255F

Performance

Method Description

This assay applies Luminex technology to the reverse sequence specific oligonucleotide DNA typing method. First, target DNA is PCR-amplified using a group-specific primer. The PCR product is biotinylated, which allows it to be detected using r-phycoerythrin-conjugated streptavidin. The PCR product is denatured and allowed to rehybridize to complementary DNA probes conjugated to fluorescently coded microspheres. A flow analyzer identifies the fluorescent intensity of phycoerythrin on each microsphere. The *HLA* class II allele or allele groups of the sample are determined by the positive and negative bead identified using a computer software program. The assignment of the *HLA* typing is based on the reaction pattern compared to patterns associated with published *HLA* gene sequences. (Package insert: One Lambda, LABType SSO Typing Tests, rev 18, 2010)

PDF Report

No

Day(s) and Time(s) Test Performed

Monday through Friday; 7:30 a.m.-5 p.m.

Analytic Time

5 days

Maximum Laboratory Time

9 days

Performing Laboratory Location

Rochester

Fees and 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 Regional Manager. For assistance, contact [Customer Service](#).

Test Classification

This test has been cleared, approved or is exempt by the U.S. 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

81376-HLA Class II typing, low resolution (eg, antigen equivalents); one locus (eg, HLA-DRB1/3/4/5, -DQB1, -DQA1, -DPB1, or -DPA1), each

LOINC® Information

| Test ID | Test Order Name | Order LOINC Value |
|---------|-----------------------------|-------------------|
| NARC | Narcolepsy Associated Ag, B | 63558-1 |

| Result ID | Test Result Name | Result LOINC Value |
|-----------|---------------------------------|--------------------|
| NARC_ | Narcolepsy Associated Ag Result | 63558-1 |
| NARCC | Interpretation | 50595-8 |