Lab Dept:	**Anatomic Pathology**
Test Name:	**HEMOCHROMATOSIS (HFE) SEQUENCING**

General Information

Lab Order Codes:	HHGA
Synonyms:	HFE Gene Analysis; HLA-H Gene; Hereditary Hemochromatosis
CPT Codes:	81256 – HFE gene analysis, common variants
Test Includes:	Detects 2 mutations: C282Y and H63D. Presence of the S65C mutation is reported only when it is observed as part of the C282Y/S65C genotype.

Logistics

Test Indications:	Useful for establishing or confirming the clinical diagnosis of HH (Hereditary Hemochromatosis) in adults, but because of concerns of the overall penetrance of these mutations, HFE genetic testing is not recommended for population screening. This test is also useful for testing of asymptomatic individuals with increase blood test of iron stores. With appropriate genetic counseling, predictive testing of individuals who have a family history of HH (careful consideration should be given to advantages and disadvantages of such testing before testing is performed).
Lab Testing Sections:	Anatomic Pathology – Sendouts
Referred to:	Mayo Clinic Laboratories (MML Test: HFET)
Phone Numbers:	MIN Lab: 612-813-6280 STP Lab: 651-220-6550
Test Availability:	Daily, 24 hours
Turnaround Time:	6 – 7 days

Special Instructions:	Specimens must arrive within 96 hours of collection. Must include a "Molecular Genetics Congenital Inherited Diseases Patient Information Sheet" with information including relevant clinical and family history information in order to provide correct interpretation of test results. Also include "Informed Consent Form for DNA Testing" is available (Supply T576). Specimens will be retained at Mayo for 3 months.

Specimen

Specimen Type:	Whole blood
Container:	Lavender top (EDTA) **or** Yellow top (ACD) tube
Draw Volume:	3.0 mL (Minimum: 3.0 mL)
Processed Volume:	Same as Draw Volume
Collection:	Routine venipuncture. Mix tubes by gentle inversion.
Special Processing:	Lab Staff: **Do not** centrifuge. Whole blood specimen should be stored and shipped at ambient temperatures. Forward promptly. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. Specimen stable ambient(preferred), refrigerated, or frozen for 4 days.
Patient Preparation:	A previous bone marrow transplant from an allogeneic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710.
Sample Rejection:	Mislabeled or unlabeled specimens

Interpretive

Reference Range:	An interpretive report will be issued.
Critical Values:	N/A

Limitations:	This assay only tests for the C282Y, H63D and S65C (reported as a part of the C282Y/S65C genotype) variants and will not detect all variants in the HFE gene that may be associated with hereditary hemochromatosis. Therefore, the absence of a detectable C282Y, H63D, or S65C variant does not rule out the possibility that an individual is a carrier of or affected with this disease. Test results should be interpreted in the context of clinical findings, family history, and other laboratory data. Errors in the interpretation of results may occur if information given is inaccurate or incomplete. Rare variants (i.e., polymorphisms) exist that could lead to false-negative or false-positive results. If results obtained do not match the clinical findings, additional testing should be considered. In rare cases, DNA variants of unknown significance may be identified. Because of concerns of the overall penetrance of HFE variants, HFE genetic testing is not recommended for population screening.
Methodology:	Droplet Digital Polymerase Chain Reaction (ddPCR)
References:	Mayo Clinic Laboratories May 2025
Updates:	2/6/2013: CPT update 5/14/2025: Updated minimum volume, turnaround time, and methodology; added specimen stability; updated links.