Helix Hereditary Hemochromatosis Targeted Test

Item	Description
Test Name	Helix Hereditary Hemochromatosis Targeted Test
Test Type	Target Analysis
Catalog Number	HFET1
Procedure Code	21697-8 (LOINC)
Test Description	Helix Hereditary Hemochromatosis Targeted Test is a diagnostic test that analyzes three variants in *HFE* associated with hereditary hemochromatosis. The two variants C282Y (c.845G>A) and H63D (c.187C>G) are always reported, whereas the S65C (c.193A>T) variant will be reported only when it is observed as part of the C282Y/S65C genotype.
Genes Tested	*HFE*: NM_000410.4:c.845G>A (p.Cys282Tyr), c.187C>G (p.His63Asp), and c.193A>T (p.Ser65Cys)
Genetics Information	This test utilizes next-generation sequencing to detect single nucleotide variants.
Indications For Testing	A relevant personal and/or family history suggestive of hereditary hemochromatosis.
Clinical Descriptions	Hereditary hemochromatosis (*HFE*) is a metabolic condition that causes inappropriate iron absorption and progressive iron overload in multiple organs, particularly the liver, heart, and pancreas. If left untreated, iron overload can lead to cirrhosis, diabetes, cardiomyopathy, and arthropathy, but early detection and regular therapeutic phlebotomy can effectively prevent complications and restore normal life expectancy.
Conditions	Hereditary hemochromatosis (*HFE*)
Interpretation	The variants reported in this test have been pre-evaluated according to American College of Medical Genetics and Genomics recommendations. Variants not included in the pre-evaluated list will not be reported.
Reclassification of Variants	Helix reviews variant classifications annually when they arise in routine processes and upon request from providers. The timing of re-review depends on clinical risk. Providers can request a variant re-review by contacting Helix Customer Support. If a classification by Helix is updated, Helix identifies affected past patients and issues revised reports. Updated results are communicated to providers prior to results being uploaded to the EHR, and patients are notified through the EHR patient portal.
Variant Evaluation	Variant classification is performed using the guidelines set forth by the American College of Medical Genetics and Genomics and the Association for Molecular Pathology, with modifications as suggested by domain specific Expert Panels of the Clinical genome Resource (ClinGen) when available. Variant pathogenicity is categorized as benign, likely benign, variant of uncertain significance (VUS), likely pathogenic, or pathogenic.
Turnaround Time - Standard	Typically 7 to 21 days
Turnaround Time - Requery (SOQO®)	Typically ≤ 5 days
Available In NY State	Yes
Test Classification	This test was developed, and its performance characteristics determined, by Helix, Inc. in a manner consistent with CLIA requirements. This test has not been cleared or approved by the US Food and Drug Administration.

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Item	Description
Performing Laboratory Information	CLIA Laboratory Number: 05D2117342 Laboratory Hours of Operation: Monday-Saturday (7AM-10:30PM PST) Address: 10170 Sorrento Valley Road, Suite 100, San Diego, CA 92121 Helix Customer Service: (844) 211-2070 Email: support@helix.com
Regulatory Information	CLIA Complexity: High Test Classification: Non-Waived/ Laboratory Developed Test
CLIA Category	Chemistry / Routine Chemistry

Methods & Limitations for Helix Hereditary Hemochromatosis Targeted Test

Extracted DNA is enriched for targeted regions and then sequenced using the Helix Exome+ (R) assay on an Illumina DNA sequencing system. Data is then aligned to a modified version of GRCh38. Small variant calling is completed using a customized version of Sentieon's DNAseq software, augmented by a proprietary small variant caller for difficult variants. Interpretation is based upon guidelines published by the American College of Medical Genetics and Genomics (ACMG) and the Association for Molecular Pathology (AMP) or their modification by ClinGen Variant Curation Expert Panels when available. Interpretation is limited to the variant indicated on the report. Helix variant classifications include pathogenic, likely pathogenic, variant of uncertain significance (VUS), likely benign, and benign. Only variants classified as pathogenic and likely pathogenic are included in the report. All reported variants are confirmed through secondary manual inspection of DNA sequence data or orthogonal testing. Risk estimations and management guidelines included in this report are based on analysis of primary literature and recommendations of applicable professional societies, and should be regarded as approximations.

Based on validation studies, this assay delivers > 99% sensitivity and specificity for single nucleotide variants. The results of a genetic test may be influenced by various factors, including bone marrow transplantation, blood transfusions, or in rare cases, hematolymphoid neoplasms.

Gene Specific Notes:
HFE: analysis is limited to NM_000410.4:c.845G>A (p.Cys282Tyr), c.187C>G (p.His63Asp), and c.193A>T (p.Ser65Cys).

Disclaimer:
This test was developed and validated by Helix, Inc. This test has not been cleared or approved by the United States Food and Drug Administration (FDA). The Helix laboratory is accredited by the College of American Pathologists (CAP) and certified under the Clinical Laboratory Improvement Amendments (CLIA #: 05D2117342) to perform high-complexity clinical tests. This test is used for clinical purposes. It should not be regarded as investigational or for research.

Targeted Genes & Methodology for Helix Hereditary Hemochromatosis Targeted Test

The following applies to the Helix Hereditary Hemochromatosis Targeted Test. Testing is performed by next-generation sequencing to evaluate for the presence of single nucleotide variants. Confirmation of select reportable variants may be performed by alternate methodologies based on internal laboratory criteria.

This list is current from June 2025 to the present. For questions regarding genes, reference transcripts, or specific regions covered, contact Helix Customer Service at (844) 211-2070.

Genomic Build: GRCh38
Catalog Number: HFET1

Gene	Transcript	Additional Evaluations
HFE	NM_000410.4	–