MAYO CLINIC LABORATORIES

Targeted Genes and Methodology Details for Fatty Acid Oxidation Gene Panel

The following applies to HFAOP / Fatty Acid Oxidation Gene Panel. Testing is performed to evaluate for the presence of variants in coding regions and extending to +/- 30 base pairs of adjacent intronic sequence on either side of the coding exons of the genes analyzed. In addition, the analysis will cover select non-coding variants. Next-generation sequencing and/or a polymerase chain reaction-based quantitative method is performed to test for the presence of copy number variants in the genes analyzed. Confirmation of select reportable variants may be performed by alternate methodologies based on internal laboratory criteria.

This list is current from February 2021 to the present. This document is intended to highlight additional evaluations for variants of high clinical interest to providers as well as technical limitations. However, this document does not comprehensively reflect all genomic regions covered by this test. For questions regarding transcripts, genes or regions covered, contact the laboratory at 800-533-1710.

Genomic Build: GRCh37 (hg19) unless otherwise specified

Gene	Reference Transcript[a]
ACAA2	NM_006111.3
ACACA	NM_198839.2
ACAD8	NM_014384.2
ACAD9	NM_014049.5
ACADL	NM_001608.4
ACADM	NM_000016.5
ACADS	NM_000017.4
ACADSB	NM_001609.4
ACADVL	NM_000018.4
ACAT1	NM_000019.4
ACAT2	NM_005891.3
ACOT9	NM_001037171.2
ALDH5A1	NM_001080.3
CPT1A	NM_001876.4
CPT2	NM_000098.3
DECR1	NM_001359.2
ECHS1	NM_004092.4
ECI1	NM_001919.4
ETFA[b]	NM_000126.4
ETFB	NM_001985.3
ETFDH	NM_004453.4
ETHE1	NM_014297.5

Gene	Reference Transcript[a]
FLAD1	NM_025207.5
GLUD1	NM_005271.5
HADH	NM_005327.5
HADHA[b]	NM_000182.5
HADHB	NM_000183.3
HMGCL	NM_000191.3
HMGCS2	NM_005518.4
HSD17B10	NM_004493.3
LPIN1	NM_145693.4
MLYCD	NM_012213.3
NADK2	NM_001085411.3
OPA1	NM_015560.2
PPARG	NM_015869.4
SLC22A5	NM_003060.4
SLC25A20	NM_000387.6
SLC25A29	NM_001039355.3
SLC25A32	NM_030780.5
SLC52A1	NM_001104577.1
SLC52A2	NM_024531.5
SLC52A3	NM_033409.4
TANGO2	NM_152906.7
TAZ	NM_000116.5

[a] Reference transcript numbers may be updated due to transcript re-versioning. Always refer to the final patient report for gene transcript information referenced at the time of testing.

[b] There are regions of this gene that cannot be effectively analyzed for the presence of copy number variants.

To verify if a specific region/exon/variant is covered by this assay, contact a laboratory genetic counselor at 800-533-1710.