Test Definition: MMPP

Mitochondrial Metabolites, Plasma

Reporting Title: Mitochondrial Metabolites, P
Performing Location: Mayo Clinic Laboratories - Rochester Main Campus

Ordering Guidance:

This test is **not the recommended** initial screening test for evaluating patients with suspected mitochondrial disorders, organic acidurias, and ketone body disorders. For these purposes, the preferred tests for first-tier assessment are OAU / Organic Acids Screen, Random, Urine; AAQP / Amino Acids, Quantitative, Plasma; and ACRN / Acylcarnitines, Quantitative, Plasma.

Analytes from LAPYP / Lactate Pyruvate Panel, Plasma are included in this test. If ordered together, LAPYP may be canceled.

Specimen Requirements:

Collection Container/Tube:
Preferred: Green top (Sodium heparin)
Acceptable: Green top (Lithium heparin)
Submission Container/Tube: Plastic vial
Specimen Volume: 0.5 mL
Collection Instructions: Centrifuge and aliquot plasma into a plastic vial.

Forms:

If not ordering electronically, complete, print, and send a Biochemical Genetics Test Request (T798) with the specimen.

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen	7 days	

Result Codes:

Result ID	Reporting Name	Type	Unit	LOINC®
616819	Interpretation	Alphanumeric		59462-2
616798	Lactic acid	Numeric	nmol/mL	2524-7
616799	2-Hydroxybutyric acid	Numeric	nmol/mL	69843-1
616800	3-Hydroxybutyric acid	Numeric	nmol/mL	6873-4
616801	Pyruvic acid	Numeric	nmol/mL	32338-6
616802	cis-Aconitic acid	Numeric	nmol/mL	75083-6
616803	Citric acid	Numeric	nmol/mL	15038-3
616804	3-Hydroxypropionic acid	Numeric	nmol/mL	47536-8
616805	3-Hydroxy-2-methylbutyric acid	Numeric	nmol/mL	69789-6
616806	3-Hydroxyisovaleric acid	Numeric	nmol/mL	72450-0
616807	Succinic acid	Numeric	nmol/mL	35871-3
616808	Fumaric acid	Numeric	nmol/mL	75081-0
616809	3-Methylglutaconic acid	Alphanumeric	nmol/mL	33273-4
616810	Malic acid	Numeric	nmol/mL	75068-7
616811	2-Ketobutyric acid	Numeric	nmol/mL	In Process

616812	2-Ketoisovaleric acid	Alphanumeric	nmol/mL	35868-9
616813	Acetoacetic acid	Alphanumeric	nmol/mL	35867-1
616814	3-Methyl-2-ketovaleric acid	Alphanumeric	nmol/mL	35869-7
616815	2-Ketoisocaproic acid	Alphanumeric	nmol/mL	35870-5
616816	2-Methylcitric acid	Numeric	nmol/mL	26904-3
616817	2-Ketoglutaric acid	Numeric	nmol/mL	69803-5
616818	Reviewed by	Alphanumeric		18771-6

LOINC® and CPT codes are provided by the performing laboratory.

Supplemental Report:

No

CPT Code Information:

82542

Reference Values:

LACTIC ACID
< or = 4000.0 nmol/mL

2-HYDROXYBUTYRIC ACID
< or = 124.0 nmol/mL

3-HYDROXYBUTYRIC ACID
< or = 700.0 nmol/mL

PYRUVIC ACID
< or = 350.0 nmol/mL

cis-ACONITIC ACID
< or = 9.0 nmol/mL

CITRIC ACID
< or = 250.0 nmol/mL

3-HYDROXYPROPIONIC ACID
< or = 12.4 nmol/mL

3-HYDROXY-2-METHYLBUTYRIC ACID
< or = 2.5 nmol/mL

3-HYDROXYISOVALERIC ACID
< or = 15.4 nmol/mL

SUCCINIC ACID
< or = 10.0 nmol/mL

FUMARIC ACID
< or = 5.0 nmol/mL

3-METHYLGLUTACONIC ACID
< or = 1.6 nmol/mL

MALIC ACID
< or = 20.0 nmol/mL

2-KETOBUTYRIC ACID
< or = 16.0 nmol/mL

2-KETOISOVALERIC ACID
< or = 35.0 nmol/mL

ACETOACETIC ACID
< or = 350.0 nmol/mL

3-METHYL-2-KETOVALERIC ACID
< or = 70.0 nmol/mL

2-KETOISOCAPROIC ACID
< or = 70.0 nmol/mL

2-METHYLCITRIC ACID
< or = 1.0 nmol/mL

2-KETOGLUTARIC ACID
< or = 40.0 nmol/mL