Urinary Metabolic Profile

16020 Linden Ave North Shoreline, WA 98133 USA Tel: (206) 365-1256 Fax: (206) 363-8790 www.usbiotek.com Director: Stephen Markus, MD

Physician: HK BioTek Ltd.

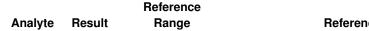
Sex: M

Collected: 10/25/2018

Patient: Accession #:

Age: 48
Sample Type: Dried Urine

Received: 11/01/2018 **Completed:** 11/09/2018



Reference Range Percentile $(\mu g/mg creatinine)$ 40 50 60 70 90 10 20 30 99 **Glycolysis Metabolites** 0.41 1 < 2.10 Pyruvate 2 10.00 Lactate < 23.10**Citric Acid Cycle Metabolites** 3 41.89 130.00 - 650.00 Citrate 4 Cis-Aconitate 17.56 < 65.00 5 Isocitrate 17.90 28.00 - 70.00 (L) 6 Alpha-Ketoglutarate 2.24 < 26.00 7 Succinate 5.29 < 22.50 8 **Fumarate** 0.25 < 1.90 9 Malate 0.87 < 4.00**Fatty Acid Oxidation** 10 Adipate 2.48 < 4.40Suberate < 2.80 11 0.47 12 Ethylmalonate 2.17 < 5.50 13 0.86 < 3.10 Methylsuccinate **Ketone Metabolites** 14 < 0.09 < 1.50 Alpha-Hydroxybutyrate 15 Beta-Hydroxybutyrate < 0.35 < 7.20**Markers for Cofactor Need** 16 0.19 < 0.40Alpha-Ketoisovalerate 17 Alpha-Ketoisocaproate 0.20 < 0.5018 Alpha-Keto-Beta-Methylvalerate 0.43 < 2.1019 Beta-Hydroxyisovalerate 5.08 < 11.20 20 Methylmalonate 0.53 < 1.60 21 **Kynurenate** 5.67 < 3.00(H)22 Hydroxymethylglutarate 1.35 < 5.90 **Markers of Neurotransmitter Metabolism** 23 Vanilmandelate 2.69 < 4.7024 < 6.80 Homovanillate 2.60 25 5-Hydroxyindoleacetate 1.10 1.30 - 13.50 (L) 26 Quinolinate 8.94 < 7.20(H)

Reference range updated 2/01/2018. Reference range is not gender adjusted. Reference range is age adjusted for children. Method: LC/MS/MS

This test is not intended to diagnose, treat, cure, or prevent any disease or replace the medical advice and/or treatment obtained from a qualified healthcare practitioner. US BioTek Laboratories, Inc. has developed and determined the performance characteristic of this test under the Clinical Laboratory Improvement Amendments (CLIA). This test has not been evaluated by the U.S. Food and Drug Administration and is considered for investigational and research purposes only. This test does not assess for neonatal inborn errors of metabolism and is based on stable renal function and normal renal clearance.

MEDIAN

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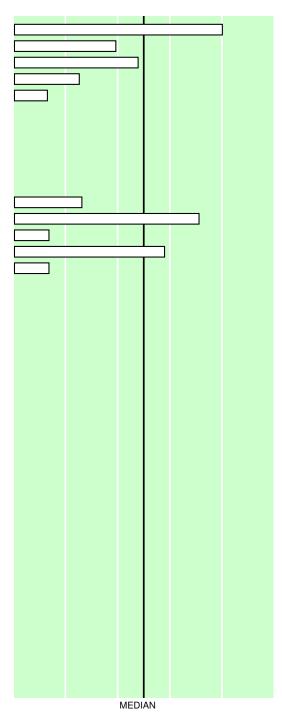
Reference

Reference Range Percentile										
0	10	20	30	40	50	60	70	80	90	99
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	0	0 10				•	•	•	3	0 10 20 30 40 50 60 70 80 90

27	Dava I ludua u uala anulla atata	0.50	< 0.60
21	Para-Hydroxyphenyllactate	0.58	< 2.60
28	Orotate	0.46	< 1.10
29	Pyroglutamate	20.84	11.00 - 43.00
30	Benzoate	0.35	< 7.00
31	Hippurate	23.85	8.00 - 672.00

Markers of Bacterial Metabolism

32	Para-Hydroxybenzoate	0.19	< 1.40
33	Para-Hydroxyphenylacetate	11.51	< 20.00
34	2-Hydroxyphenylacetate	0.47	< 1.40
35	3-Indoleacetate	3.25	0.60 - 10.50
36	Tricarballylate	0.20	< 1.50



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