Metabolon
SMALL MOLECULES, BIG INSIGHTS™

Microbiome Panel

A highly-curated metabolomics panel that screens for over 400 key small molecules to accelerate microbiome discovery.

- Vetted Microbiome Metabolites
- Easily Integrate with Metagenomics Data
- Powerful Informatics Tools

Reveal the Impact of Microbial Activity on Host Health with a Microbiome-Focused Metabolite Panel

The microbiome's capacity to generate a vast repertoire of metabolites has profound implications for health and disease. These microbial metabolites are key mediators of microbiome-host interactions, influencing health, disease, treatment response and overall well-being.

To help researchers understand the functional outputs of microbiome activity, Metabolon designed a carefully curated panel of metabolites that reports on microbiome activity. The Microbiome Panel screens for > 400 microbiome-associated metabolites that were vetted in scientific literature as microbiome-relevant, covering key biology that spans dozens of chemical classes. Short Chain Fatty Acids are measured with rigorous absolute quantitation within the Microbiome Panel, enabling comparison of these microbially-derived and clinically relevant biomarkers to values reported in the literature. Collectively, these metabolites report on key outputs of microbial activity, moving beyond just characterizing the microbial community composition of a sample into measuring the molecules they produce that influence host physiology.

Top Microbiome Panel Pathways

- Short Chain Fatty Acids – with absolute quantitation
- Bile Acids – Primary and Secondary
- Tryptophan (Indole) Metabolites
- Amino Acid Metabolites Including Aromatic Compounds
- Diet and Drug Metabolites
- Antibiotics and Xenobiotics
- Plus 50 additional pathways

Pair a Metagenomics Sequencing Option with the Microbiome Panel or the Global Discovery Panel for Microbial Community Profiling Tailored to Your Research Goals

- Amplicon Sequencing
- Shotgun Sequencing at 4 read depths
  - Shallow: 3 million reads
  - Balanced: 15 million reads
  - Deep: 20 million reads
  - Ultra Deep: 80 million reads
- Bring Your Own (BYO) Metagenomics

Sample Requirements for Microbiome Panel

Sample Type	Sample Requirement
Plasma, Serum, Urine*	≥ 150 ul
Fecal Solid Material	≥ 150 mg
DNA Genotek ME-200	Full collection tube preferred**

***For biofluids, the SCFA component of the Microbiome Panel is validated for human plasma and serum. For other liquids, including urine, we will use the protocol that was validated for plasma and serum.**
****Full collection tube contents preferred to enable best homogenization practices; 1.5 mL aliquot minimum (homogenize before aliquoting).**

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The Microbiome Panel features metabolites specifically selected to reflect key microbial biology in circulation (plasma/serum), stool, and urine.

	Plasma		Serum	Feces		Urine	
SubPathway	Panel Library	Avg # Per Study	Avg # Per Study	Panel Library	Avg # Per Study	Panel Library	Avg # Per Study
GRAND TOTAL	**429**	**221**	**250**	**482**	**286**	**648**	**259**
Short Chain Fatty Acids – Absolute Quantitation	**9**	**9**	**9**	**9**	**9**	**9**	**9***
Secondary Bile Acid Metabolism	48	23	26	49	35	31	12
Benzoate Metabolism	39	20	21	37	22	53	33
Food Component/Plant	29	11	13	34	19	149	61
Tryptophan Metabolism	25	13	16	23	13	33	17
Tyrosine Metabolism	18	11	12	19	13	33	23
Leucine, Isoleucine and Valine Metabolism	18	11	12	17	14	30	16
Primary Bile Acid Metabolism	18	11	12	19	11	15	6.2
Drug - Antibiotic	16	1.1	1	15	0.8	33	2
Methionine, Cysteine, SAM and Taurine Metabolism	13	6.1	8	9	7.1	22	6.3
Histidine Metabolism	12	5.6	6.6	14	10	21	10
Acetylated Peptides	10	3.2	3.4	11	3.2	18	12
Phenylalanine Metabolism	10	6.6	6.5	11	9.1	10	3.7
Urea cycle; Arginine and Proline Metabolism	7	4.6	6.1	10	6.3	19	4.4
Fatty Acid, Monohydroxy	7	5.7	6.2	9	4.7	5	2.8
Bacterial/Fungal	7	1.3	1.4	16	4.9	9	1.9
Long Chain Saturated Fatty Acid	6	5	5.2	6	5	4	0.03
Alanine and Aspartate Metabolism	6	2.7	4.4	7	5.5	6	2.7
Chemical	6	4.8	4.8	5	1.5	6	2.5
Glutamate Metabolism	6	2.5	3.9	10	6.5	9	2.5
Hemoglobin and Porphyrin Metabolism	6	3.1	4.2	7	4.7	5	0.37
Lysine Metabolism	5	2.9	3.6	10	8.3	13	2.4
TCA Cycle	5	3.3	3.7	5	4.8	5	2.3
Glycine, Serine and Threonine Metabolism	5	3.5	4.5	7	3.9	7	1.2
Lactoyl Amino Acid	5	1.7	1	5	1.7	6	0.72
+57 other pathways	**98**	**57**	**65**	**122**	**72**	**106**	**32**

***Note that the SCFA portion of the Microbiome Panel is only validated for human plasma, serum, and fecal samples. Although not validated for urine, we have successfully analyzed SCFAs in urine samples using the protocol validated for plasma and serum.**

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Metabolomic insights: Don't get left behind

Metabolon has been at the forefront of metabolomics utilization, having executed over 15,000 projects over the last 25 years. Metabolon revolutionizes metabolomics studies with its cutting-edge technology and comprehensive analytical solutions. It empowers researchers to delve deeper into the complexities of biology, providing invaluable insights into health, disease, and beyond. With its unrivaled accuracy, efficiency, and depth of analysis, Metabolon accelerates discovery, enabling the identification of novel biomarkers, elucidation of metabolic pathways, and advancement of precision medicine. Our unique ability to provide key data and interpret them for our clients makes us a reliable collaborator as you navigate complex biological questions to drive scientific progress.

To learn more about how Metabolon can help your study, please contact us today.

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This panel is for Research Use Only and is not to be used for diagnostic purposes.