

Tryptophan metabolism assay

Metabolomics at the intersection of immunity, neuronal function, and gut homeostasis

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Tryptophan metabolism assay

Three pathways, one solution

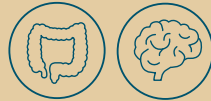
Kynurenine

The kynurenine pathway plays a major role in inflammatory signaling. Metabolite ratios from this pathway enable insights into enzyme activities and immune activation.



Serotonin

The serotonin pathway and its metabolites are crucial in gut-brain axis communication. The metabolite serotonin itself is involved in learning, mood regulation, and sleep.



Indole

Indole derivatives are direct signaling molecules used by the microbiome in communication with the host, with a broad impact on inflammatory pathways.



Covered metabolites

Analyte	LLOQ* [μM] in plasma serum	Pathway
Tryptophan	0.1	Serotonin pathway
5-Hydroxyindoleacetic acid (5-HIAA)	0.002	
5-Hydroxytryptophan	0.001	
Serotonin	0.005	
Anthranilic acid	0.001	
3-Hydroxyanthranilic acid	0.025	Kynurenine pathway
3-Hydroxykynurenine	0.002	
Kynurenic acid	0.0002	
Kynurenine	0.01	
Picolinic acid	0.002	
Quinaldic acid	0.001	
Quinolinic acid	0.02	
Xanthurenic acid	0.005	
Nicotinamide	0.001	Indole pathway
Nicotinic acid	0.002	
3-Indolepropionic acid (IPA)	0.05	
Neopterin	0.001	

Quantify up to 17 metabolites and 19 metabolism indicators

Standardized, quality-controlled assay with absolute quantification, and comprehensive coverage of the tryptophan pathway in a single assay.

Analytical details

- LC-MS-based assay
- Robust 7-point calibration
- 3 levels of quality controls

Sample requirements

- 70 μL plasma/serum/urine (assay volume: 50 μl)
- 50 mg tissue
- 200 mg feces, wet weight
- For other matrices, please contact us (<https://biocrates.com/contact>)

* Lower limit of quantification

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