

# L-Histidine ELISA kit – High Sensitivity – Plasma samples

Ref: IS-I-1300R

L-Histidine (His) is an essential amino acid displaying a unique properties profile, involved in a number of biological activities, e.g. in pH buffering, in metal ion chelation, and in oxidative species scavenging, which confer it many physiological properties as antioxidant, anti-inflammatory, and in erythropoiesis and immune system regulation. While there are several pathways of His degradation, most catabolism is directed to protein turnover and glutamate production and begins with histidase-dependent deamination. Also, the minor pathways of His as a precursor of histamine and His-rich proteins and peptides make it unique among other amino acids.

<b>Sample type</b>	Plasma
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<b>Capacity</b>	96 tests
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<b>Sensitivity</b>	1.4 $\mu$ M
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<b>Range</b>	10 - 390 $\mu$ M
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<b>Assay time</b>	Sample preparation 3h, ELISA overnight
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<b>Reactivity</b>	Reacts with all species
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# INFORMATIONS

## Product overview

<b>Product name</b>	L-Histidine ELISA kit
<b>Description</b>	Competitive ELISA kit for the quantitative measurement of L-Histidine (His) in plasma samples. <b>For research use only</b>
<b>Format</b>	96-well plate
<b>Samples</b>	Plasma
<b>Minimal sample volume</b>	10µL
<b>Reactivity</b>	Reacts with all species
<b>Standard range</b>	5.3 – 390µM (1.1 – 81.8µg/mL)
<b>Sensitivity</b>	1.4µM
<b>Specificity</b>	No significant cross-reactivity was observed with Histamine dihydrochloride, L-Glutamic acid, 3-Methyl-L-histidine & L-Histidinol dihydrochloride
<b>Assay time</b>	Sample preparation 3h and ELISA overnight
<b>Storage</b>	Store at 2-8°C for up to 6 months
<b>Datasheets</b>	<a href="#">Instructions for use</a> , <a href="#">Material Safety Datasheet</a>

For research use only – Do not use for diagnostic

## PROTOCOLS

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<b>Sample collection &amp; storage</b>	EDTA Plasma Store samples at 2-8°C for up to 48h or -20°C for longer period (up to 6 months)
<b>Sample preparation</b>	Sample preparation (3 hours)
<b>ELISA</b>	L-Histidine antiserum overnight incubation, revelation and read steps (1h)
<b>Detailed protocol</b>	<a href="#">Download instructions for use</a>

## REFERENCES

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### Selected articles on Histidine

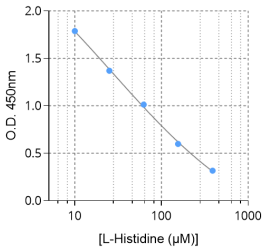
- Holecek et al., [Histidine in Health and Disease: Metabolism, Physiological Importance, and Use as a Supplement](#), Nutrients, 2020
- Poon et al., [Histidine-rich glycoprotein: the Swiss Army knife of mammalian plasma](#), Blood, 2010
- Li et al., [Amino acids and immune function](#), Br J Nutr, 2007
- Tsukano et al., [Plasma histidine concentrations as a specific biomarker for intestinal mucosal damage in calves with cryptosporidiosis](#), Res Vet Sci, 2020
- Kanarek et al., [Histidine catabolism is a major determinant of methotrexate sensitivity](#), Nature, 2018
- Frezza et al., [Histidine metabolism boosts cancer therapy](#), Nature, 2018
- Petrova et al., [Potential Benefits and Pitfalls of Histidine Supplementation for Cancer Therapy Enhancement](#), J Nutr, 2020

## Product pictures

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L-Histidine ELISA kit



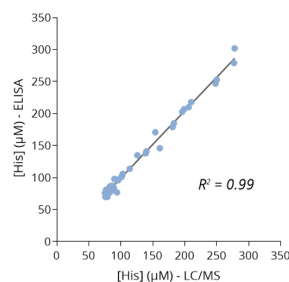
Typical standard curve of Histidine ELISA



L-Histidine ELISA kit



L-Histidine ELISA kit



**Cross-validation of L-Histidine ELISA and LC/MS data in human plasma samples**

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## Contact information

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**To order, review, ask for technical support, visit product page at:**

<https://www.immusmol.com/shop/l-histidine-elisa-kit/>