

Ornithine ELISA kit

Ref: IS-I-1000R

Free L-Arginine (Arg) is provided by diet, de novo synthesis and protein turnover. De novo synthesis is sufficiently important to not consider Arg as an essential amino acid. However, in some circumstances - eg. early development, infection and inflammation - de novo synthesis is not enough and require dietary Arg, which is thus classified as a conditionally-essential amino acid. Whatever the source, Arg can be metabolized through different degrading pathways which include **i)** the nitric oxide synthase (NOS) pathway providing Citrulline and NO, as well as **ii)** the well-known Arginase pathway leading to the production of Urea and **L-Ornithine (Orn)**.

Sample type Plasma

Capacity 96 tests

Sensitivity 8.5µM

Range 20 - 781.25µM

Assay time Sample preparation 3h, ELISA overnight

Reactivity Reacts with all species

distributed in the US/Canada by:

EAGLE BIOSCIENCES, INC.

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INFORMATIONS

Product overview

Product name	L-Ornithine ELISA kit
Description	Competitive ELISA kit for the quantitative measurement of L-Ornithine (Orn) in plasma samples. For research use only
Format	96-well plate
Samples	Plasma
Minimal sample volume	20µL
Reactivity	Reacts with all species
Standard range	20 – 781.25µM
Sensitivity	8.5µM
Specificity	No significant cross-reactivity was observed with Agmatine, L-Arginine, NG-Methyl-L-Arginine, L-Argino-succinate, L-Citrulline, L-Glutamine & L-Glutamate
Assay time	Sample preparation 3h and ELISA overnight
Storage	Store at 2-8°C for up to 6 months
Datasheets	Instructions for use , Material Safety Datasheet

For research use only – Do not use for diagnostic

PROTOCOLS

Sample collection & storage	EDTA Plasma Store samples at 2-8°C for up to 48h or -20°C for longer period (up to 6 months)
Sample preparation	Sample preparation (3 hours)
ELISA	L-Ornithine antiserum overnight incubation, revelation and read steps (1h)

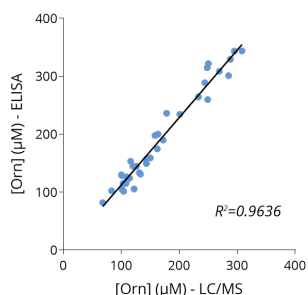
Detailed protocol	Download instructions for use
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REFERENCES

Selected articles on Ornithine

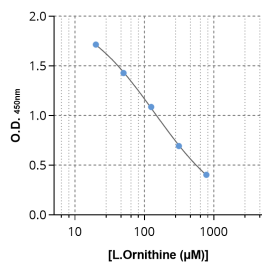
- Caldwell et al., [Arginase: A Multifaceted Enzyme Important in Health and Disease](#), Physiol Rev., 2018
- Niu et al., Arginase: [An emerging and promising therapeutic target for cancer treatment](#), Biomed Pharmacother. 2022
- Apiz-Saab et al., [Pancreatic tumors activate arginine biosynthesis to adapt to myeloid-driven amino acid stress](#), bioRxiv 2022

Product pictures



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

Orn was quantified in human plasma samples from healthy subjects using IS-I-1000R ELISA kit or by LC/MS. Correlation study showed $R^2=0.9636$, thereby confirming the accuracy of the immunoassay



Typical standard curve of Ornithine ELISA

Typical standard curve obtained with the Orn ELISA kit. In this competitive enzyme immunoassay, optical density is inversely correlated with Orn levels within a linear range of 20 - 781.25µM. (example data - do not use for calculation).



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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/ornithine-elisa-kit/>

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