

# Arginine-to-Ornithine ratio ELISA pack – Serum, Plasma

Ref: ISE-0410R

Given the importance of Arginine metabolic pathway in physio-pathological processes and in particular in immune regulation, we developed and validated a robust and ease-to-use immunoassay for the simultaneous detection and quantification of both **Arginine** and **Ornithine** in plasma / sera originating from multiple species (20µL min. sample volume).

**Sample type** Serum, Plasma

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**Kit capacity** 2 x 96 tests

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**Sensitivity** Arg: 2.1µM Orn: 8.5µM

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**Range** Arg: 5.12 - 200µM Orn: 20 - 781.25µM

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**Reactivity** Reacts with all species

## INFORMATIONS

### Product overview

<b>Product name</b>	Arginine/Ornithine ELISA pack
<b>Description</b>	Two enzyme immunoassays (ELISA) allowing the quantitative determination of L-Arginine and L-Ornithine in plasma/serum samples. <b>For research use only</b>
<b>Labels</b>	RUO
<b>Format</b>	2 x 96-well plate
<b>Samples</b>	Serum, Plasma
<b>Minimum sample volume</b>	20µL
<b>Reactivity</b>	Reacts with all species
<b>Standard range</b>	Arg: 5.12 – 200µM Orn: 20 – 781.25µM
<b>Sensitivity</b>	Arg: 2.1µM Orn: 8.5µM
<b>Specificity</b>	No significant cross-reactivity was observed with analogs for each kit. See product pages for <a href="#">Arginine ELISA</a> and <a href="#">Ornithine ELISA</a>
<b>Storage</b>	Store at 2-8°C for to 6 months
<b>Datasheets</b>	<a href="#">Instructions for use - Arg kit</a> , <a href="#">Instructions for use - Orn kit</a> <a href="#">Safety datasheet - Arg kit</a> , <a href="#">Safety datasheet Orn kit</a>

## PROTOCOLS

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### Sample collection & storage

Plasma: Use EDTA as anticoagulant

Serum: Do not use lipemic, haemolytic samples, as well as samples containing precipitates or fibrin strands. Store samples at 2-8°C for up to 48h or -20°C for longer period (up to 6 months)

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### Sample preparation

Sample preparation (3 hours)

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### ELISA

Antisera overnight incubation, revelation and read steps (1h)

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### Detailed protocol

[Instructions for use – Arg kit](#), [Instructions for use – Orn kit](#)

## REFERENCES

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### Selected articles

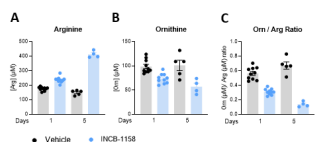
- Caldwell et al., [Arginase: A Multifaceted Enzyme Important in Health and Disease](#), *Physiol Rev.*, 2018
- Niu et al., Arginase: [An emerging and promising therapeutic target for cancer treatment](#), *Biomed Pharmacother.* 2022
- Apiz-Saab et al., [Pancreatic tumors activate arginine biosynthesis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

## Product pictures

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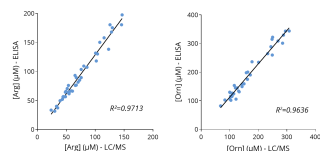


## Arginine / Ornithine ELISA pack



## The arginase inhibitor INCB-1158 restores Arg level while limiting Orn production in sera of MC38-tumor bearing mouse model

C57BL/6J mice were subcutaneously inoculated with MC38 colorectal cancer cell line and treated orally with 100mg/kg of INCB-1158 for one or five consecutive days. Sera were collected after each treatment period and subjected to Arg and Orn level quantification using #IS-I-0400R and #IS-I-1000R ELISA kits, respectively. Orn to Arg ratio was then calculated as a surrogate of Arginase activity.



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

Arg and Orn were quantified in human plasma samples from healthy subjects using respectively IS-0400R and IS-I-1000R ELISA kits, or by LC/MS. Correlation study confirmed the accuracy of the immunoassays.

## Contact information

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

<https://www.immusmol.com/shop/arginine-ornithine-elisa-pack/>