

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

Kit capacity 2 x 96 tests

Sensitivity Arg: 2.1µM Orn: 8.5µM

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

Reactivity Reacts with all species

INFORMATIONS

Product overview

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

PROTOCOLS

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)

Sample preparation

Sample preparation (3 hours)

ELISA

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

Detailed protocol

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

REFERENCES

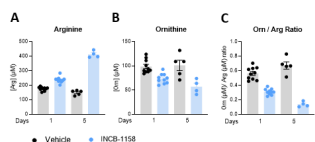
Selected articles

- 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

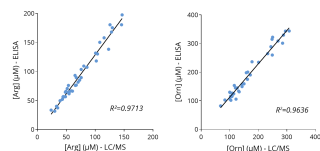


Arginine / Ornithine ELISA pack



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/>