

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 Serum, Plasma

type

Kit 2 x 96 tests

capacity

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-Ornitine 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 - 200μΜ Orn: 20 - 781.25μΜ
Sensitivity	Arg: 2.1μM Orn: 8.5μM
Specificity	No significant cross-reactivity was observed with analogs for each kit. See product pages for <u>Arginine ELISA</u> and <u>Ornithine ELISA</u>
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

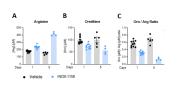
- Caldwell et al., <u>Arginase: A Multifaceted Enzyme Important in Health and Disease</u>, Physiol Rev.,
 2018
- Niu et al., Arginase: <u>An emerging and promising therapeutic target for cancer treatment</u>, Biomed Pharmacother. 2022
- Apiz-Saab et al., <u>Pancreatic tumors activate arginine biosynthesis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

Product pictures



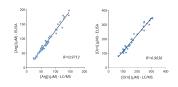


Arginine / Ornithine ELISA pack



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/