

# L-Asparagine ELISA kit

Ref: IS-I-1600R

L-Asparagine is a conditionally non-essential amino acid that can be produced in our body. However, Asparagine (Asn) is essential for the growth of highly proliferative cells such as cancers and it must be provided by the environment. Targeting Asn using recombinant Asparaginase – as to deprive tumor cells of an important energetic source – thus represents an attractive target and has been for instance approved for the treatment of Acute Lymphoblastic Leukemia. Also, while targeting Asn metabolism figures as an attractive therapeutic avenue, Asn level constitutes a valuable biomarker. Indeed, among other evidences, it has been shown that quantification of Asn nicely discriminates healthy subjects from patients with Epithelial Ovarian Cancer. More recently, increased Asn level has been linked to poor survival in female patients with colorectal cancer.

**Sample type** Plasma

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**Capacity** 96 tests

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**Sensitivity** 2.3 $\mu$ M (0.30 $\mu$ g/mL)

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**Range** 4.4 - 375 $\mu$ M (0.6 - 49.5 $\mu$ g/mL)

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**Assay time** Sample preparation 3h, ELISA overnight

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**Reactivity** Reacts with all species

# INFORMATIONS

## Product overview

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|------------------------------|--|
| <b>Product name</b>          | L-Asparagine ELISA kit   |
| <b>Description</b>           | Competitive ELISA kit for the quantitative measurement of L-Asparagine (Asn) in plasma samples. <b>For research use only</b> |
| <b>Format</b>                | 96-well plate  |
| <b>Samples</b>               | Plasma   |
| <b>Minimal sample volume</b> | 20µL   |
| <b>Reactivity</b>            | Reacts with all species  |
| <b>Standard range</b>        | 4.4 – 375µM (0.6 – 49.5µg/mL)  |
| <b>Sensitivity</b>           | 2.3µM (0.30µg/mL)  |
| <b>Specificity</b>           | No significant cross-reactivity was observed with D-Asparagine, L-Aspartate, L-Glutamate, L-Glutamine.                       |
| <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<br>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-Asparagine antiserum overnight incubation, revelation and read steps (1h)                     |

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| <b>Detailed protocol</b> | <a href="#">Download instructions for use</a> |
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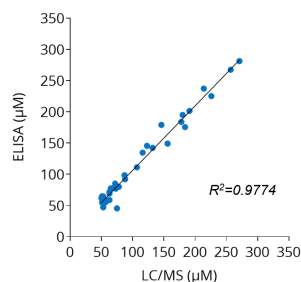
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## REFERENCES

### Selected articles on Asparagine

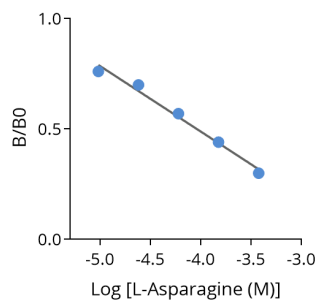
- Van Trimpont et al., [Novel Insights on the Use of L-Asparaginase as an Efficient and Safe Anti-Cancer Therapy](#), Cancers, 2022
- Wang et al., [Serum metabolite signatures of epithelial ovarian cancer based on targeted metabolomics](#), Clinica Chimica Acta, 2021
- Shen et al., [Asparagine Metabolism in Tumors Is Linked to Poor Survival in Females with Colorectal Cancer: A Cohort Study](#), Metabolites, 2021

## Product pictures



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

Asn was quantified in human plasma samples from healthy subjects using IS-I-1600R ELISA kit or by LC/MS. Correlation study showed  $R^2=0.9774$ , thereby confirming the accuracy of the immunoassay.



### Typical standard curve of Arginine ELISA

Typical standard curve obtained with the Asn ELISA kit where the optical density is inversely correlated within levels within a linear range of 4.4 - 375 $\mu$ M. (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/l-asparagine-elisa-kit/>