L-Lysine ELISA kit – High Sensitivity – Plasma Samples

Ref: IS-I-1400R

L-Lysine (Lys) is an essential amino acid since it's not produced in the body and must be supplied through the diet. It's one of the building blocks for protein, peptide and non-peptide synthesis, and is thus found involved in several physiological and biochemical processes. Imbalance in circulating Lys levels can be observed in many conditions such as inherited diseases on enzymes involved in Lys catabolism, diabetes-dependent cardiovascular disease, as well as human immunodeficiency viruses-1 infection.
In order to provide an accurate and easy-to-implement tool to evaluate Lys functions, we developed and validated a novel ELISA kit for Lys quantitation in plasma samples. The assay requires a sample volume as low as 20µL and is characterized by a 13µM sensitivity.

Sample type	Plasma
Capacity	96 tests
Sensitivity	13µM
Range	16 - 650µM
Assay time	Sample preparation 3h, ELISA overnight
Reactivity	Reacts with all species

INFORMATIONS

Product overview

Product name	L-Lysine ELISA kit
Description	Competitive ELISA kit for the quantitative measurement of L-Lysine (Lys) in plasma samples. **For research use only**
Format	96-well plate
Samples	Plasma
Minimal sample volume	20µL
Reactivity	Reacts with all species
Standard range	16 – 650µM
Sensitivity	13µM
Specificity	No significant cross-reactivity was observed with Cadaverine dihydrochloride, L-HomoArginine hydrochloride, N-methyl-L-Lysine hydrichloride and N-acetyk-L-Lysine
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-Lysine antiserum overnight incubation, revelation and read steps (1h)
Detailed protocol	**Download instructions for use**

REFERENCES

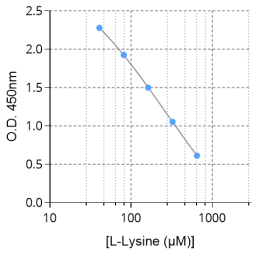
Selected articles on Lysine

- Yin et al., Effects of Lysine deficiency and Lys-Lys dipeptide on cellular apoptosis and amino acids metabolism, Mol Nutr Food Res, 2017
- Guoyao Wu, Functional amino acids in nutrition and health, Amino Acids, 2013
- Lieu et al., Amino acids in cancer, Exp Mol Med, 2020
- Razquin et al., Lysine pathway metabolites and the risk of type 2 diabetes and cardiovascular disease in the PREDIMED study: results from two case-cohort studies, Cardiovasc Diabetol., 2019
- E. Butorov, Relationship between plasma l-lysine concentrations and levels of HIV-1 RNA, Virulence, 2013

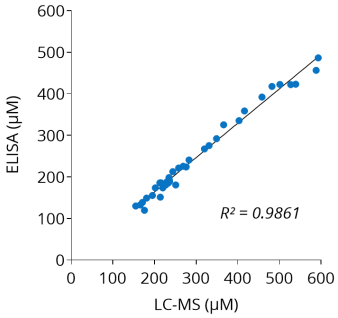
Product pictures

 # IS-I-1400 : L-Lysine (Lys) ELISA kit

96-w plate format // Low volume samples // Sensitive, easy-to-implement // Cross-validated with LC/MS



Typical standard curve of Lysine ELISA



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

Lys was quantified in human plasma samples from 38 healthy subjects using IS-I-1400 ELISA kit or by LC/MS. Correlation study showed R2=0.986, thereby confirming the accuracy of the immunoassay.

Contact information

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

https://www.immusmol.com/shop/l-lysine-elisa-kit/