

homoArginine ELISA Kit

Ref: IS-I-0500

Our homoArginine (hArg) ELISA kit allows for the determination of hArg in serum and plasma samples working with a minimal sample volume of 20 μ L. The kit is easy to implement and well suited for both preclinical and clinical studies.

SCIENTIFIC BACKGROUND

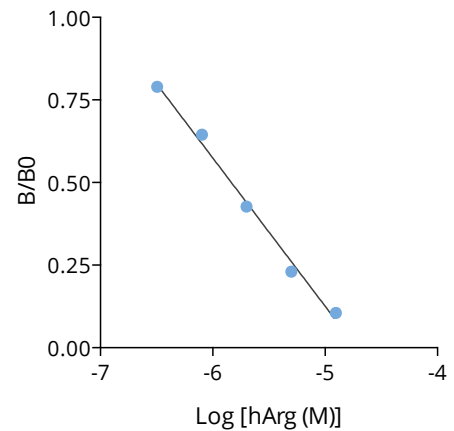
HomoArginine (hArg) is a basic non-essential amino acid that exerts beneficial effects on vascular homeostasis, more likely through the increase of nitric oxide (NO) that can be explained through two mechanisms since hArg **i)** serves as a precursor of NO and **ii)** favors the elevation of L-Arg - main substrate of NO synthase - by inhibiting the enzyme Arginase. Different epidemiological studies have proposed the non-proteogenic amino-acid hArg as a candidate cardiovascular risk factor. More precisely, the association between hArg levels and the risk of adverse cardiovascular outcomes is inverse, ie. low hArg level is associated with a high cardiovascular risk. Further investigations - preclinical and clinical - are still needed to get more insights on the the physiology of hArg and its role as biomarker in cardiovascular diseases.

ASSAY SPECIFICATIONS

Format	96-well kit
Species Reactivity	Any species
Samples	Plasma, Serum
Sample volume	20 μ L
Sensitivity	125 nM
Assay range	0.32 - 12.5 μ M
Assay time	Sample preparation: 3h ELISA overnight

STANDARD CURVE

Standard curve obtained with the hArg ELISA kit. In this competitive enzyme Immunoassay, optical density is inversely correlated with hArg levels within a linear range of 0.32 - 12.5 μ M.



METHOD VALIDATION

hArg was quantified either using IS-I-0500 ELISA kit or by liquid chromatography-mass spectrometry (LC/MS) in serum samples from 40 human subjects. Correlation study led to $R^2=0.9352$, confirming the accuracy of the ELISA assay.

