ImmuSmol

Arginine ELISA Kit

IS-I-0400

Our Arginine (ARG) ELISA kit allows for the determination of ARG in serum and plasma samples in a minimal sample volume of 20µL. The kit is easy to implement and well suited for both preclinical and clinical studies.

SCIENTIFIC BACKGROUND

Arginine (ARG) is a basic non-essential amino acid well known to participate in physiological functions such as **i)** vascular tone homeostasis as contributing to the production of nitric oxide (NO) and **ii)** immune response control, through NO synthase (NOS) and Arginase enzymes, respectively.

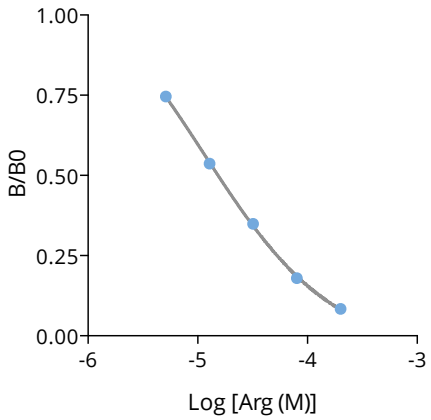
A dysregulation in ARG catabolism has been already linked to tumor progression and immune escape. Indeed, overexpression of Arginase in tumor and immunosuppressive cells (eg. Myeloid Derived Suppressor Cells) contributes to an excessive use of ARG thereby limiting its availability for effector immune cells. Arginase represents therefore an attractive therapeutic target to restore anti-tumor immunity and inhibitors (eg. INCB001158) are currently under clinical development in several cancer indications. ARG measurement in biological samples such as plasma or serum thus represents a suitable surrogate marker for novel Arginase inhibitors.

ASSAY SPECIFICATIONS

Format	96-well kit
Species Reactivity	Any species
Samples	Plasma, Serum, Cell culture
Sample volume	20µL
Sensitivity	2.1µM
Assay range	5.12 - 200µM
Assay time	Sample preparation: 3h ELISA overnight

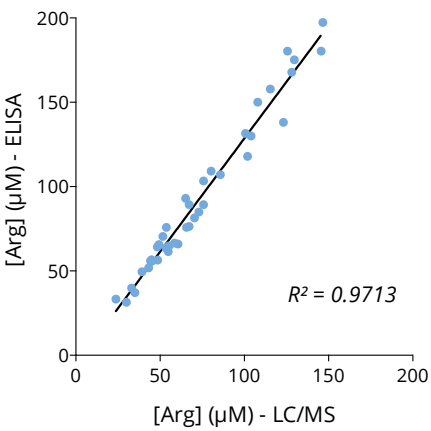
STANDARD CURVE

Standard curve obtained with the hArg ELISA kit. In this competitive enzyme Immunoassay, optical density is inversely correlated with L-Arg levels within a linear range of 5.12 - 200µM.



METHOD VALIDATION

L-Arg was quantified in human plasma samples from 40 healthy donors either using IS-I-0400 ELISA kit or by liquid chromatography–mass spectrometry (LC/MS). Correlation study showed a $R^2 = 0.9713$, thereby confirming the accuracy of the immunoassay.



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