Human indoleamine 2,3-dioxygenase,IDO ELISA Kit

Product Code	CSB-E09966h
Abbreviation	IDO1
Target Name	indoleamine 2,3-dioxygenase 1
Uniprot No.	P14902
Alias	CD107B, IDO, INDO, indole 2,3-dioxygenase|indoleamine-pyrrole 2,3 dioxygenase
Product Type	ELISA Kit
Immunogen Species	Homo sapiens (Human)
Sample Types	serum, plasma, tissue homogenates, cell lysates
Detection Range	0.78 ng/mL-50 ng/mL
Sensitivity	0.195 ng/mL
Assay Time	1-5h
Sample Volume	50-100ul
Detection Wavelength	450 nm
Lead Time	3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.
Research Area	Metabolism
Gene Names	IDO1
Tag Info	quantitative
Protein Description	Sandwich

Description

This human IDO1 ELISA Kit is suitable for qualitatively determining human concentrations in multiple biological fluids, including human serum, plasma, and tissue homogenates in vitro. IDO1 a cytosolic enzyme with a heme (Fe2+) prosthetic group that catalyzes catalyze the oxidative catabolism of the least-abundant essential amino acid, L-Trp (L-tryptophan), along the kynurenine pathway. IDO1 converts the essential amino acid Trp to kynurenine (Kyn) by cleaving the 2,3-double bond of the indole ring while molecular oxygen merges into the unsealed molecule. It has been identified as a prominent immune regulatory enzyme that can regulate immune cell activation status and phenotype through enzyme-dependent deprivation of L-Trp and its conversion into the aryl hydrocarbon receptor ligand kynurenine or IDO1-mediated signaling. IDO1 also has pro-cancer effects. Overexpression of IDO1 has been detected in more than half of tumors using IDO1-related immunosuppressive mechanisms to promote their metastasis and survival.

This kit uses the quantitative sandwich-based enzyme immunoassay technique to measure the amount of human IDO1 in the sample. Standards and samples are respectively added to the microplate wells pre-coated with an anti-human IDO1 antibody. Biotin-labeled IDO1 antibody, HRP-avidin, and TMB substrate are pipped into the microplate in turn. The capture antibody pre-coated on the plate captures the IDO1 in the human samples. IDO1 binds to the biotinylated anti-IDO1 human monoclonal antibody. And the biotin on the biotinylated anti-IDO1 human monoclonal antibody binds to the avidin on the enzyme label, forming immune complexes. The color renders blue after the addition of the TMB substrate. The addition of the stop solution into the wells immediately turns the blue into yellow. The concentration of IDO1 in the samples is directly proportional to OD (450nm). Each manufactured lot of this ELISA kit was quality tested for criteria such as sensitivity, specificity, precision, linearity, and lot-to-lot consistency.

Product Precision

Intra-assay Precision (Precision within an assay): CV%<8%

Three samples of known concentration were tested twenty times on one plate to assess.

Inter-assay Precision (Precision between assays): CV%<10%

Three samples of known concentration were tested in twenty assays to assess.

Linearity

To assess the linearity of the assay, samples were spiked with high concentrations of human IDO in various matrices and diluted with the Sample Diluent to produce samples with values within the dynamic range of the assay.

?	Sample	Serum(n=4)
1:1	Average %	90
	Range %	85-99
1:2	Average %	95
	Range %	91-102
1:4	Average %	89
	Range %	84-94
1:8	Average %	93
	Range %	89-98

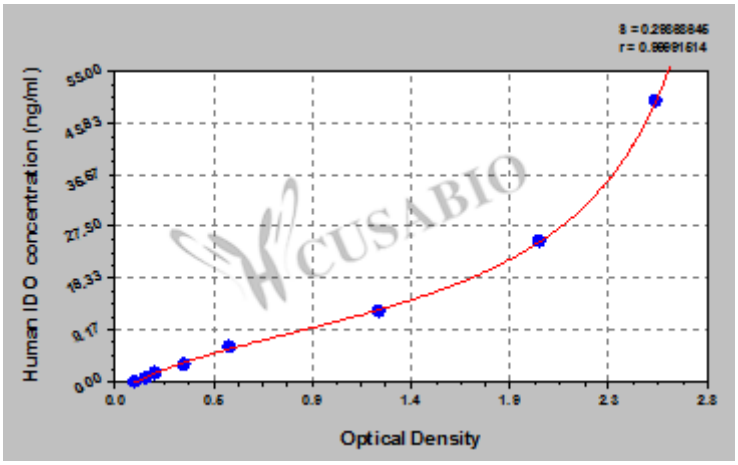
Recovery

The recovery of human IDO spiked to levels throughout the range of the assay in various matrices was evaluated. Samples were diluted prior to assay as directed in the Sample Preparation section.

Sample Type	Average % Recovery	Range
Serum (n=5)	97	91-104
EDTA plasma (n=4)	86	80-90

Typical

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



ng/ml	OD1	OD2	Average	Corrected
50	2.574	2.552	2.563	2.461
25	2.078	1.949	2.014	1.912
12.5	1.228	1.278	1.253	1.151
6.25	0.537	0.560	0.549	0.447
3.12	0.326	0.340	0.333	0.231
1.56	0.204	0.197	0.201	0.099
0.78	0.159	0.152	0.156	0.054
0	0.103	0.100	0.102	?

Msds

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