Anti-Human IDO1 Antibody [PSH09-86] - BSA and Azide free (Capture)

HA723154

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Cap)
Clone number:	PSH09-86

Description: IDO1 is the target for therapy in a range of clinical settings, including cancer, chronic infections, autoimmune and allergic syndromes, and transplantation. IDO1 and IDO2 are 2 distinct enzymes which catalyze the same reaction. IDO2 affinity for tryptophan is much lower than that of IDO1. 50% of Caucasians harbor polymorphisms which abolish IDO2 enzymatic activity. IDO2 is expressed in human tumors in an inactive form: tryptophan degradation is entirely provided by IDO1 in these cells. Elevated IDO1 expression is a hallmark of major viral infections including HIV, HBV, HCV or influenza and also of major bacteria infections, such as Tb, CAP, listeriosis and sepsis. Depletion of tryptophan and production of tryptophan metabolites with bactericidal activity are important as direct anti-pathogen mechanisms. Pathogens are able to highjack the immunosuppressive effects of IDO1 and make use of them to facilitate their own life cycle.

Immunogen: Recombinant protein within Human IDO1 aa 1-403.

Positive control: Recombinant Human IDO1 protein (HA210938).

Subcellular location: Cytoplasm

Database links: SwissProt: P14902 Human

Recommended Dilutions:

ELISA(Cap) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH09-87] to Human IDO1 antibody (Detector) (HA723155) and Recombinant Human IDO1 protein (HA210938) as the standard. The reference range value is 78-10,000pg/ml.

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

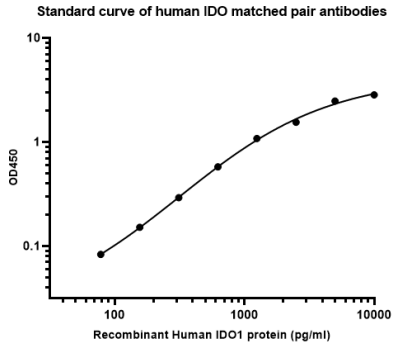

Fig1: Sandwich ELISA analysis of human IDO matched pair antibodies

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA723154) diluted in carbonate/bicarbonate buffer, at a concentration of 2ug/ml overnight at 4℃. Wells of the plate were washed, blocked with 150 µl 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Human IDO1 protein (HA210938) starting from 10000 pg/ml to 0 pg/ml and detect antibody (HA723155, Biotin, 0.2 µg/ml) for 1 hour at 30℃ with shaking. Then the plate was washed and incubated with 100 µl per well of SA-HRP for 0.5 hour at 30℃ with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

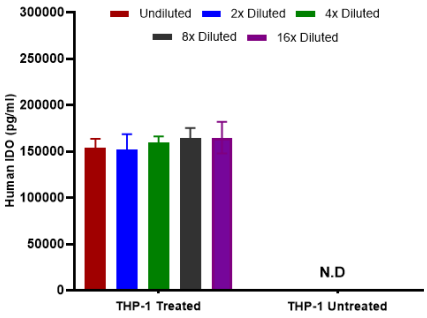

Fig2: Interpolated concentrations of native IDO in IFN-r stimulated Hela cell extracts based on a 1000 ug/ml extract load.

Interpolated concentration of native IDO was measured in duplicate at different sample concentrations and interpolated from the IDO standard curves. The interpolated dilution factor corrected values were plotted (mean +/- SD, n=2). The mean IDO concentration was determined to be 158,961 pg/mL in IFN-r stimulated Hela cell extracts. IDO was not detected in naive HeLa cells with a 1000 ug/mL extract load.

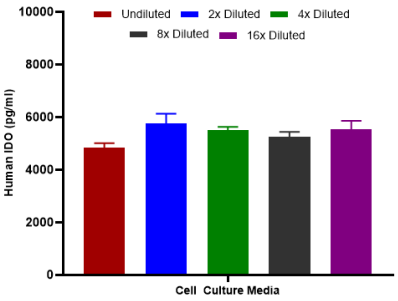

Fig3: Interpolated concentrations of spiked IDO in cell culture media samples.

The concentrations of IDO were measured in duplicates, interpolated from the IDO standard curves and corrected for sample dilution. Undiluted samples are as follows: cell culture media 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2).

Background References

1. Roehrig U.F., Majjigapu S.R., Vogel P., Zoete V., Michielin O. Challenges in the discovery of indoleamine 2,3-dioxygenase 1 (IDO1) inhibitors. J. Med. Chem. 58:9421-9437 (2015)
2. Schmidt S.V., Schultze J.L. New insights into IDO biology in bacterial and viral infections. Front. Immunol. 5:384-384 (2014)