Anti-Human CD276 Antibody [PSH05-93] - BSA and Azide free (Detector)

HA722492

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Det)
Molecular Wt:	Predicted band size: 57 kDa
Clone number:	PSH05-93

Description: May participate in the regulation of T-cell-mediated immune response. May play a protective role in tumor cells by inhibiting natural-killer mediated cell lysis as well as a role of marker for detection of neuroblastoma cells. May be involved in the development of acute and chronic transplant rejection and in the regulation of lymphocytic activity at mucosal surfaces. Could also play a key role in providing the placenta and fetus with a suitable immunological environment throughout pregnancy. Both isoform 1 and isoform 2 appear to be redundant in their ability to modulate CD4 T-cell responses. Isoform 2 is shown to enhance the induction of cytotoxic T-cells and selectively stimulates interferon gamma production in the presence of T-cell receptor signaling. B7-H3 locus underwent genomic duplication leading to tandemly repeated immunoglobulin-like V and C domains (VC domains). The dominantly expressed human B7-H3 isoform contains tandemly duplicated VC domains. In contrast, mouse B7-H3 transcript contains only one single VC domain form due to an exon structure corresponding to V domain-(pseudoexon C)-(pseudoexon V)-C domain. This duplication appearing in primates is suggested to be very recent supporting a model of multiple independent emergence of tandem VC repeats within human and monkey species.

Immunogen: Recombinant protein within Human CD276 aa 29-466 (HA210964).

Positive control: Recombinant Human CD276 protein (HA210964).

Subcellular location: Membrane.

Database links: SwissProt: Q5ZPR3 Human

Recommended Dilutions:

ELISA(Det) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH05-92] to Human CD276 (Capture) (HA722491) and Recombinant Human CD276 protein (HA210964) as the standard. The reference range value is 30.9-2500 pg/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

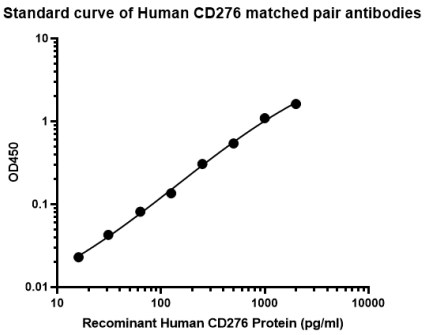

Fig1: Sandwich ELISA analysis of Human CD276 matched pair antibodies

Elisa assay was performed by coating wells of a 96-well plate with 50 µl per well of capture antibody (HA722491) diluted in carbonate/bicarbonate buffer, at a concentration of 2 µg/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 CD276 protein (HA210964) starting from 2,000 pg/ml to 0 pg/ml and detect antibody (HA722491, Biotin, 0.1 µg/ml) for 1 hour at 30℃ with shaking. Then the plate was washed and incubated with 50 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.

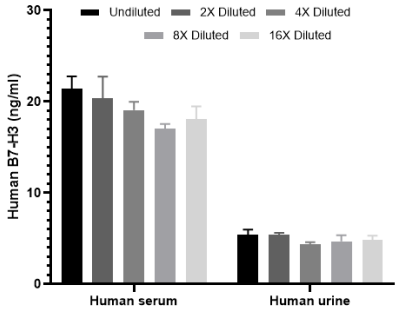

Fig2: Interpolated concentrations of native B7-H3 in human serum and human urine samples.

The concentrations of B7-H3 were measured in triplicates, interpolated from the B7-H3 standard curve and corrected for sample dilution. Undiluted samples are human serum 5% and human urine 10%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=3). The mean B7-H3 concentration was determined to be 19.1ng/ml in human serum and 4.9 ng/ml in human urine.

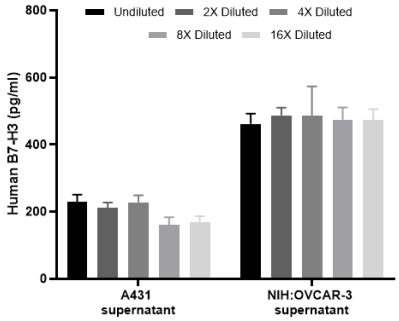

Fig3: Interpolated concentrations of native B7-H3 in A431 and NIH:OVCAR-3 cell culture supernatant.

The concentrations of B7-H3 were measured in triplicates, interpolated from the B7-H3 standard curve and corrected for sample dilution. Undiluted samples are A431 cell culture supernatant 100% and NIH:OVCAR-3 cell culture supernatant 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=3). The mean B7-H3 concentration was determined to be 199.5 pg/ml in A431 cell culture supernatant and 476.8 pg/ml in NIH:OVCAR-3 cell culture supernatant.

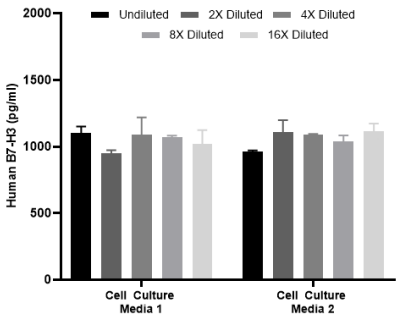

Fig4: Interpolated concentrations of spiked B7-H3 in human cell culture media samples.

The concentrations of B7-H3 were measured in triplicates, interpolated from the B7-H3 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. Chapoval A.I., Ni J., Lau J.S., Wilcox R.A., Flies D.B., Liu D., Dong H., Sica G.L., Zhu G., Chen L. B7-H3: a costimulatory molecule for T cell activation and IFN-gamma production. Nat. Immunol. 2:269-274 (2001)
2. Ling V., Wu P.W., Spaulding V., Kieleczawa J., Luxenberg D., Carreno B.M., Collins M. Duplication of primate and rodent B7-H3 immunoglobulin V- and C-like domains: divergent history of functional redundancy and exon loss. Genomics 82:365-377 (2003)