Anti-Human PD1 Antibody [SJ01-91] - BSA and Azide free (Capture)

HA723521

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Cap)
Clone number:	SJ01-91

Description: Programmed cell death protein 1 (PD-1), (CD279 cluster of differentiation 279). PD-1 is a protein encoded in humans by the PDCD1 gene. PD-1 is a cell surface receptor on T cells and B cells that has a role in regulating the immune system's response to the cells of the human body by down-regulating the immune system and promoting self-tolerance by suppressing T cell inflammatory activity. This prevents autoimmune diseases, but it can also prevent the immune system from killing cancer cells. PD-1 is an immune checkpoint and guards against autoimmunity through two mechanisms. First, it promotes apoptosis (programmed cell death) of antigen-specific T-cells in lymph nodes. Second, it reduces apoptosis in regulatory T cells (anti-inflammatory, suppressive T cells). PD-1 inhibitors, a new class of drugs that block PD-1, activate the immune system to attack tumors and are used to treat certain types of cancer. PD-1 is a cell surface receptor that belongs to the immunoglobulin superfamily and is expressed on T cells and pro-B cells. PD-1 binds two ligands, PD-L1 and PD-L2.

Immunogen: Recombinant protein within Human PD1 protein aa 24-170 (HA210922).

Positive control: Recombinant Human PD1 protein (HA210922).

Subcellular location: Cell membrane.

Database links: SwissProt: Q15116 Human

Recommended Dilutions:

ELISA(Cap) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH13-38] to Human PD1 antibody (Detector) (HA723522) or Rabbit monoclonal [PSH13-39] to Human PD1 antibody (Detector) (HA723524) and recombinant Human PD1 protein (HA210922) as the standard. The reference range value is 15.6-2,000 pg/mL.

Storage Buffer: 1*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

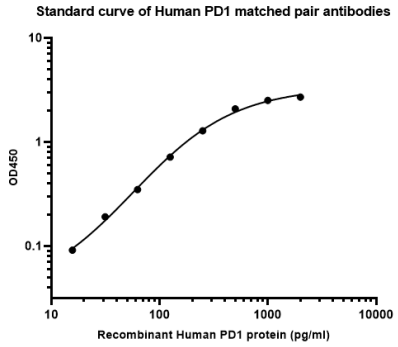

Fig1: Sandwich ELISA analysis of Human PD1 matched pair antibodies

Capture: HA723521, Human PD1 Rabbit mAb [SJ01-91]
Detector: HA723522, Human PD1 Rabbit mAb [PSH13-38]

Elisa assay was performed by coating wells of a 96-well plate with 50 µl per well of capture antibody (HA723521) 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 PD1 protein (HA210922) starting from 2,000 pg/ml to 0 pg/ml and detect antibody (HA723522, Biotin, 0.2 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.

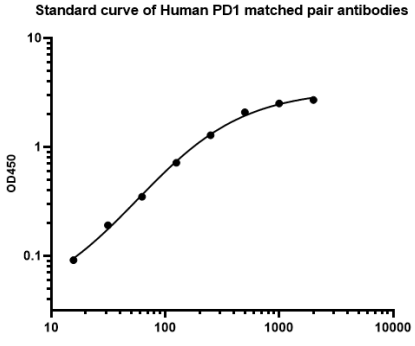

Fig2: Sandwich ELISA analysis of Human PD1 matched pair antibodies

Capture: HA723521, Human PD1 Rabbit mAb [SJ01-91]
Detector: HA723524, Human PD1 Rabbit mAb [PSH13-39]

Elisa assay was performed by coating wells of a 96-well plate with 50 µl per well of capture antibody (HA723521) 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 PD1 protein (HA210922) starting from 2,000 pg/ml to 0 pg/ml and detect antibody (HA723524, Biotin, 0.2 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.

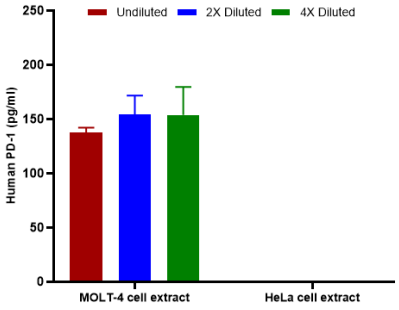

Fig3: Interpolated concentrations of native PD1 in MOLT-4 and HeLa extract samples based on a 1,000 µg/ml extract load.

Capture: HA723521, Human PD1 Rabbit mAb [SJ01-91]
Detector: HA723522, Human PD1 Rabbit mAb [PSH13-38]

The concentrations of PD1 were measured in triplicates, interpolated from the PD1 standard curve and corrected for sample dilution. Undiluted samples are MOLT-4 extract 100% and HeLa extract 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=3). The mean PD1 concentration was determined to be 148.6 pg/ml in MOLT-4 extract and undetectable in HeLa extract.

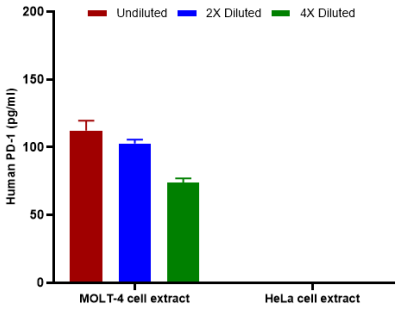

Fig4: Interpolated concentrations of native PD1 in MOLT-4 and HeLa extract samples based on a 1,000 µg/ml extract load.

Capture: HA723521, Human PD1 Rabbit mAb [SJ01-91]
Detector: HA723524, Human PD1 Rabbit mAb [PSH13-39]

The concentrations of PD1 were measured in triplicates, interpolated from the PD-1 standard curve and corrected for sample dilution. Undiluted samples are MOLT-4 extract 100% and HeLa extract 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=3). The mean PD1 concentration was determined to be 96.2 pg/ml in MOLT-4 extract and undetectable in HeLa extract.

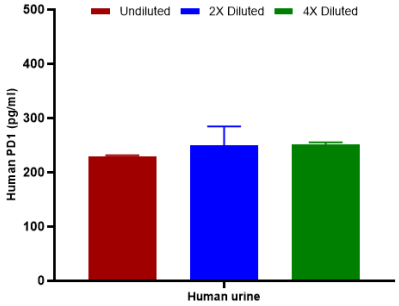

Fig5: Interpolated concentrations of native PD1 in human urine samples.

Capture: HA723521, Human PD1 Rabbit mAb [SJ01-91]
Detector: HA723522, Human PD1 Rabbit mAb [PSH13-38]

The concentrations of PD1 were measured in duplicates, interpolated from the PD1 standard curve and corrected for sample dilution. Undiluted samples are human urine 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean PD1 concentration was determined to be 243.4 pg/ml in human urine.

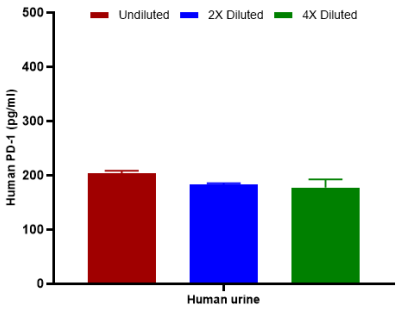

Fig6: Interpolated concentrations of native PD1 in human urine samples.

Capture: HA723521, Human PD1 Rabbit mAb [SJ01-91]
Detector: HA723524, Human PD1 Rabbit mAb [PSH13-39]

The concentrations of PD1 were measured in duplicates, interpolated from the PD1 standard curve and corrected for sample dilution. Undiluted samples are human urine 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean PD1 concentration was determined to be 187.8 pg/ml in human urine.

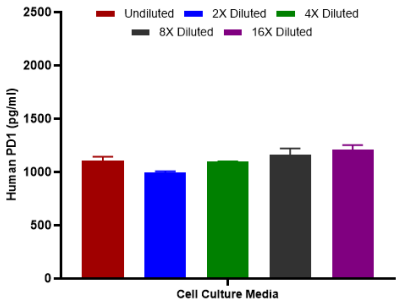

Fig7: Interpolated concentrations of spiked PD1 in human cell culture media samples.

Capture: HA723521, Human PD1 Rabbit mAb [SJ01-91]
Detector: HA723522, Human PD1 Rabbit mAb [PSH13-38]

The concentrations of PD1 were measured in duplicates, interpolated from the PD1 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).

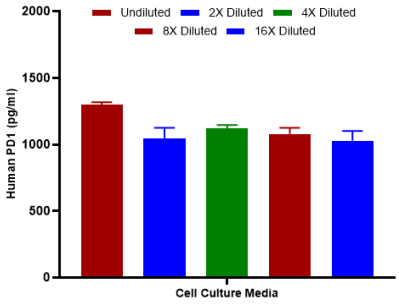

Fig8: Interpolated concentrations of spiked PD1 in human cell culture media samples.

Capture: HA723521, Human PD1 Rabbit mAb [SJ01-91]
Detector: HA723524, Human PD1 Rabbit mAb [PSH13-39]

The concentrations of PD1 were measured in duplicates, interpolated from the PD1 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).

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Lei Q et al. Resistance Mechanisms of Anti-PD1/PDL1 Therapy in Solid Tumors. Front Cell Dev Biol. 2020 Jul
2. Chamoto K et al. Insights from a 30-year journey: function, regulation and therapeutic modulation of PD1. Nat Rev Immunol. 2023 Oct