Anti-Human IGFBP1 Antibody [PSH17-56] - BSA and Azide free (Capture)

HA723931

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Cap)
Clone number:	PSH17-56

Description: Insulin-like growth factor-binding protein 1 (IBP-1) also known as placental protein 12 (PP12) is a protein that in humans is encoded by the IGFBP1 gene. This gene is a member of the Insulin-like growth factor-binding protein (IGFBP) family and encodes a protein with an IGFBP domain and a type-I thyroglobulin domain. The protein binds both insulin-like growth factors (IGFs) I and II and circulates in the plasma. Binding of this protein prolongs the half-life of the IGFs and alters their interaction with cell surface receptors. Alternate transcriptional splice variants, encoding different isoforms, have been characterized.

Immunogen: Recombinant protein within Human IGFBP1 aa 26-259 (HA211115).

Positive control: Recombinant Human IGFBP1 protein (HA211115).

Subcellular location: Secreted.

Database links: SwissProt: P08833 Human

Recommended Dilutions:

ELISA(Cap) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH17-57] to Human IGFBP1 antibody (Detector) (HA723932) or Rabbit monoclonal [PSH17-58] to Human IGFBP1 antibody (Detector) (HA723933) and Recombinant Human IGFBP1 protein (HA211115) as the standard. The reference range value is 9.8-2,500 pg/mL.

Storage Buffer: 1*PBS (pH7.4).

Storage Instruction: Store at 2-8℃. Avoid freeze.

Purity: Protein A affinity purified.

Images

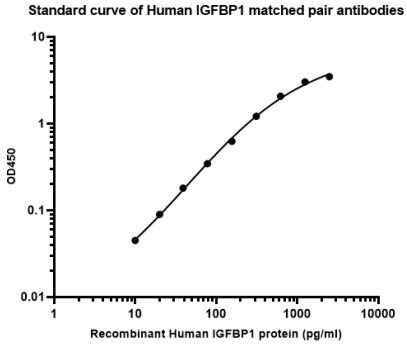


Fig1: Sandwich ELISA analysis of Human IGFBP1 matched pair antibodies

Capture: HA723931, Human IGFBP1 Rabbit mAb [PSH17-56]
Detector: HA723932, Human IGFBP1 Rabbit mAb [PSH17-57]

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA723931) 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 IGFBP1 protein (HA211115) starting from 2500 pg/ml to 0 pg/ml and detect antibody (HA723932, 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.

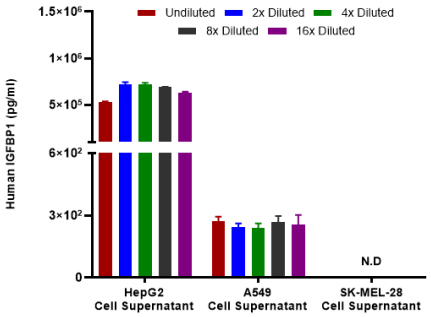


Fig2: Interpolated concentrations of native IGFBP1 in human samples.

Capture: HA723931, Human IGFBP1 Rabbit mAb [PSH17-56]
Detector: HA723932, Human IGFBP1 Rabbit mAb [PSH17-57]

Interpolated concentration of native IGFBP1 was measured in duplicate at different sample concentrations. The interpolated dilution factor corrected values were plotted (mean +/- SD, n=2). The mean IGFBP1 concentration was determined to be 659,072 pg/mL in HepG2 and 257 pg/ml in A549 cell culture supernatant. There was no detectable signal in SK-MEL-28 cell culture supernatant.

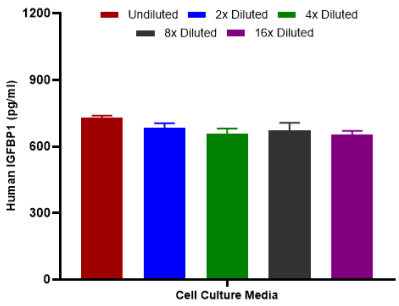


Fig3: Interpolated concentrations of spiked IGFBP1 in cell culture media samples.

Capture: HA723931, Human IGFBP1 Rabbit mAb [PSH17-56]
Detector: HA723932, Human IGFBP1 Rabbit mAb [PSH17-57]

The concentrations of IGFBP1 were measured in duplicates, interpolated from the IGFBP1 standard curves and corrected for sample dilution. Diluted samples are as follows: 50% cell culture media with FBS. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2).

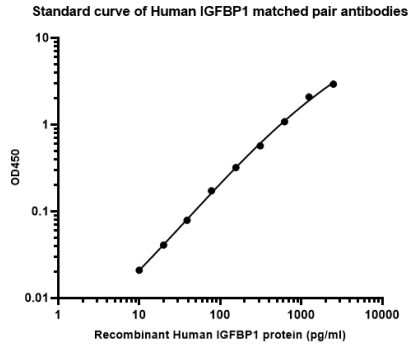


Fig4: Sandwich ELISA analysis of Human IGFBP1 matched pair antibodies

Capture: HA723931, Human IGFBP1 Rabbit mAb [PSH17-56]
Detector: HA723933, Human IGFBP1 Rabbit mAb [PSH17-58]

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA723931) 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 IGFBP1 protein (HA211115) starting from 2500 pg/ml to 0 pg/ml and detect antibody (HA723932, 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.

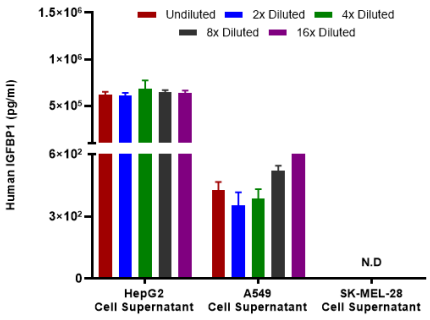


Fig5: Interpolated concentrations of native IGFBP1 in human samples.

Capture: HA723931, Human IGFBP1 Rabbit mAb [PSH17-56]
Detector: HA723933, Human IGFBP1 Rabbit mAb [PSH17-58]

Interpolated concentration of native IGFBP1 was measured in duplicate at different sample concentrations. The interpolated dilution factor corrected values were plotted (mean +/- SD, n=2). The mean IGFBP1 concentration was determined to be 639,127 pg/mL in HepG2 and 485 pg/ml in A549 cell culture supernatant. There was no detectable signal in SK-MEL-28 cell culture supernatant.

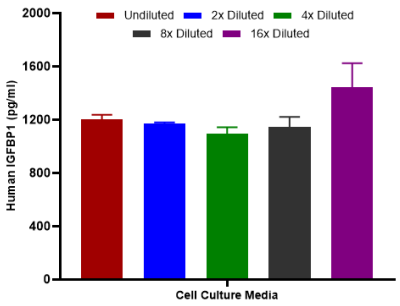


Fig6: Interpolated concentrations of spiked IGFBP1 in cell culture media samples.

Capture: HA723931, Human IGFBP1 Rabbit mAb [PSH17-56]
Detector: HA723933, Human IGFBP1 Rabbit mAb [PSH17-58]

The concentrations of IGFBP1 were measured in duplicates, interpolated from the IGFBP1 standard curves and corrected for sample dilution. Diluted samples are as follows: 50% cell culture media with FBS. 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. Hivert MF et al. Placental IGFBP1 levels during early pregnancy and the risk of insulin resistance and gestational diabetes. Med. 2024 Jun
2. Cai G et al. IGFBP1 Sustains Cell Survival during Spatially-Confined Migration and Promotes Tumor Metastasis. Adv Sci (Weinh). 2023 Jul