Anti-Human CXCL1/GRO alpha Antibody [PSH05-94] - BSA and Azide free (Capture)

HA722493

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Cap)
Molecular Wt:	Predicted band size: 11 kDa
Clone number:	PSH05-94

Description: This antimicrobial gene encodes a member of the CXC subfamily of chemokines. The encoded protein is a secreted growth factor that signals through the G-protein coupled receptor, CXC receptor 2. This protein plays a role in inflammation and as a chemoattractant for neutrophils. Aberrant expression of this protein is associated with the growth and progression of certain tumors. A naturally occurring processed form of this protein has increased chemotactic activity. Alternate splicing results in coding and non-coding variants of this gene. A pseudogene of this gene is found on chromosome 4. Has chemotactic activity for neutrophils. May play a role in inflammation and exerts its effects on endothelial cells in an autocrine fashion. In vitro, the processed forms GRO-alpha(4-73), GRO-alpha(5-73) and GRO-alpha(6-73) show a 30-fold higher chemotactic activity.

Immunogen: Recombinant protein within Human CXCL1/GRO alpha aa 35-107.

Positive control: Recombinant standard Human CXCL1/GRO alpha protein (HA210838).

Subcellular location: Secreted.

Database links: SwissProt: P09341 Human

Recommended Dilutions:

ELISA(Cap) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH05-95] to Human CXCL1/GRO alpha (Detecor) (HA722494) and recombinant standard Human CXCL1/GRO alpha protein (HA210838) as the standard. The reference range value is 7.4-1,800 pg/ml.

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4℃.

Purity: Protein A affinity purified.

Images

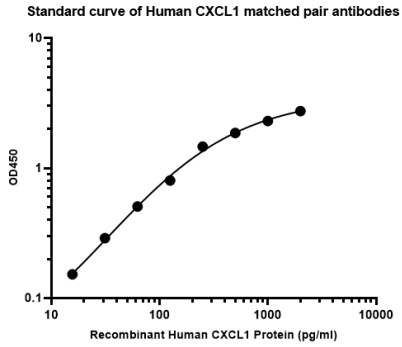

Fig1: Sandwich ELISA analysis of human CXCL1 matched pair antibodies

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA722493) 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 standard Human CXCL1/GRO alpha protein (HA210838) starting from 2000 pg/ml to 0 pg/ml and detect antibody (HA722494, 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.

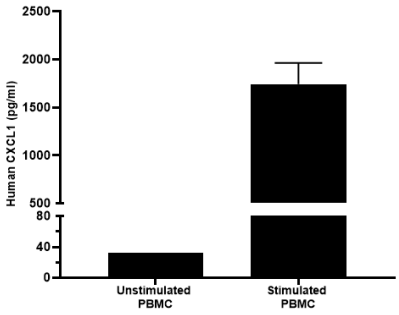

Fig2: Interpolated concentrations of native CXCL1 in human PBMC culture supernatant samples.

Human PBMCs were cultured for 5 days at 37˚C in the presence or absence of 10ug/ml PHA-M. The concentrations of CXCL1 were interpolated from the standard curve and corrected for sample dilution. The mean CXCL1 concentration was determined to be 32pg/mL in unstimulated PBMC supernatants, and 1745 pg/mL in stimulated PBMC supernatants.

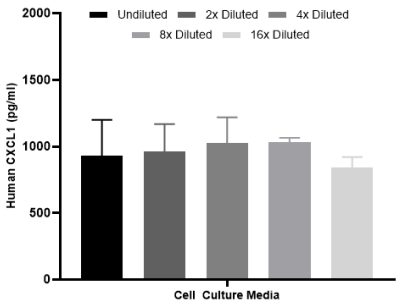

Fig3: Interpolated concentrations of spiked CXCL1 in human cell culture media samples.

The concentrations of CXCL1 were measured in duplicates, interpolated from the CXCL1 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. Wuyts A., Govaerts C., Struyf S., Lenaerts J.-P., Put W., Conings R., Proost P., Van Damme J. Isolation of the CXC chemokines ENA-78, GRO alpha and GRO gamma from tumor cells and leukocytes reveals NH2-terminal heterogeneity. Functional comparison of different natural isoforms. Eur. J. Biochem. 260:421-429 (1999)
2. Kong J., Xu S., Zhang P., Zhao Y. CXCL1 promotes immune escape in colorectal cancer by autophagy-mediated MHC-I degradation. Hum Immunol 84:110716-110716 (2023)