Anti-Human M-CSF Antibody [PSH11-37] - BSA and Azide free (Capture)

HA723324

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Cap)
Clone number:	PSH11-37

Description: Cytokine that plays an essential role in the regulation of survival, proliferation and differentiation of hematopoietic precursor cells, especially mononuclear phagocytes, such as macrophages and monocytes. Promotes the release of pro-inflammatory chemokines, and thereby plays an important role in innate immunity and in inflammatory processes. Plays an important role in the regulation of osteoclast proliferation and differentiation, the regulation of bone resorption, and is required for normal bone development. Required for normal male and female fertility. Promotes reorganization of the actin cytoskeleton, regulates formation of membrane ruffles, cell adhesion and cell migration. Plays a role in lipoprotein clearance. Aberrant expression of CSF1 or CSF1R can promote cancer cell proliferation, invasion and formation of metastases. Overexpression of CSF1 or CSF1R is observed in a significant percentage of breast, ovarian, prostate, and endometrial cancers. Aberrant expression of CSF1 or CSF1R may play a role in inflammatory diseases, such as rheumatoid arthritis, glomerulonephritis, atherosclerosis, and allograft rejection.

Immunogen: Recombinant protein within Human M-CSF aa 33-255 (HA210918).

Positive control: Recombinant Human M-CSF protein (HA210918).

Subcellular location: Cell membrane. Secreted.

Database links: SwissProt: P09603 Human

Recommended Dilutions:

ELISA(Cap) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH11-38] to Human M-CSF antibody (Detector) (HA723325) and Recombinant Human M-CSF protein (HA210593) as the standard. The reference range value is 39.1-5,000 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

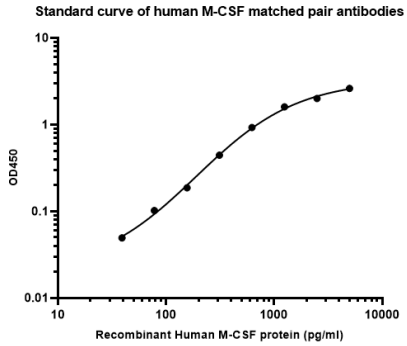

Fig1: Sandwich ELISA analysis of human M-CSF matched pair antibodies

Elisa assay was performed by coating wells of a 96-well plate with 50 µl per well of capture antibody (HA723324) diluted in carbonate/bicarbonate buffer, at a concentration of 5 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 M-CSF protein (HA210918) starting from 5,000 pg/ml to 0 pg/ml and detect antibody (HA72332, 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.

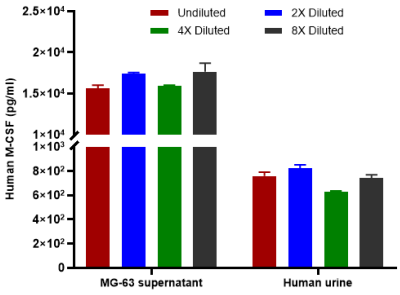

Fig2: Interpolated concentrations of native M-CSF in MG-63 cell culture supernatant and human urine samples.

The concentrations of M-CSF were measured in duplicates, interpolated from the M-CSF standard curve and corrected for sample dilution. Undiluted samples are MG-63 cell culture supernatant 20% and human urine 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean M-CSF concentration was determined to be 16,640 pg/ml in MG-63 cell culture supernatant and 738 pg/ml in human urine samples.

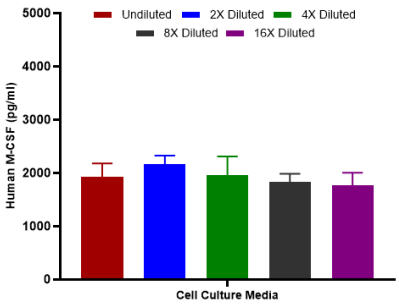

Fig3: Interpolated concentrations of spiked M-CSF in human cell culture media samples.

The concentrations of M-CSF were measured in duplicates, interpolated from the M-CSF 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. Chitu V., Stanley E.R. Colony-stimulating factor-1 in immunity and inflammation. Curr. Opin. Immunol. 18:39-48 (2006)
2. Patsialou A., Wyckoff J., Wang Y., Goswami S., Stanley E.R., Condeelis J.S. Invasion of human breast cancer cells in vivo requires both paracrine and autocrine loops involving the colony-stimulating factor-1 receptor. Cancer Res. 69:9498-9506 (2009)