Anti-Human CSF-1-R Antibody [PSH12-66] - BSA and Azide free (Capture/Detector)

HA723474

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Cap), ELISA(Det)
Clone number:	PSH12-66

Description: Colony stimulating factor 1 receptor (CSF1R), also known as macrophage colony-stimulating factor receptor (M-CSFR), and CD115 (Cluster of Differentiation 115), is a cell-surface protein encoded by the human CSF1R gene (known also as c-FMS). CSF1R is a receptor that can be activated by two ligands: colony stimulating factor 1 (CSF-1) and interleukin-34 (IL-34). CSF1R is highly expressed in myeloid cells, and CSF1R signaling is necessary for the survival, proliferation, and differentiation of many myeloid cell types in vivo and in vitro. CSF1R signaling is involved in many diseases and is targeted in therapies for cancer, neurodegeneration, and inflammatory bone diseases.

Immunogen: Recombinant protein within Human CSF-1-R aa 20-517 (HA211149).

Positive control: Recombinant Human CSF-1-R protein (HA211149).

Subcellular location: Cell membrane.

Database links: SwissProt: P07333 Human

Recommended Dilutions:

ELISA(Cap)	Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH12-67] to Human CSF-1-R antibody (Detector) (HA723475) and recombinant Human CSF-1-R (HA211149) protein as the standard. The reference range value is 39.1-5000 pg/mL.
ELISA(Det)	Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH12-68] to Human CSF-1-R antibody (Capture) (HA723477) and recombinant Human CSF-1-R protein (HA211149) as the standard. The reference range value is 156-5,000 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

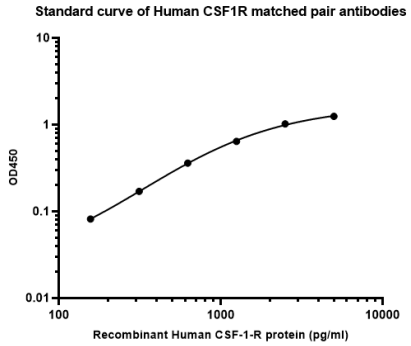

Fig1: Sandwich ELISA analysis of Human CSF-1-R matched pair antibodies

Capture: HA723474, Human CSF-1-R Rabbit mAb [PSH12-66]
Detector: HA723475, Human CSF-1-R Rabbit mAb [PSH12-67]

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA723474) 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 CSF-1-R protein (HA211149) starting from 5,000 pg/ml to 0 pg/ml and detect antibody (HA723475, 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.

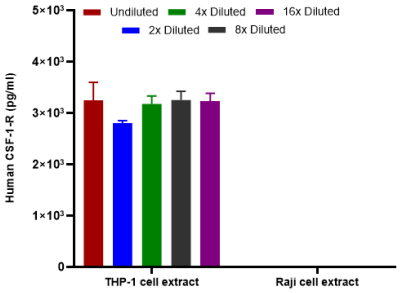

Fig2: Interpolated concentrations of native CSF1R in THP-1 and Raji cell extract samples based on a 1000 µg/ml extract load.

Capture: HA723474, Human CSF-1-R Rabbit mAb [PSH12-66]
Detector: HA723475, Human CSF-1-R Rabbit mAb [PSH12-67]

Interpolated concentration of native CSF1R was measured in duplicate at different sample concentrations. The interpolated dilution factor corrected values were plotted (mean +/- SD, n=2). The mean CSF1R concentration was determined to be 3144 pg/mL in THP-1 cell extract and undetectable in Raji cell extract.

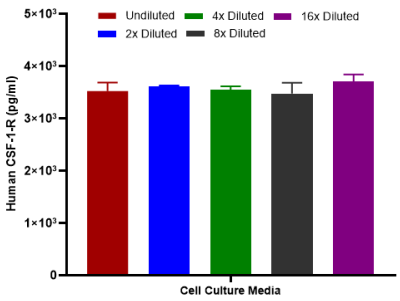

Fig3: Interpolated concentrations of spiked CSF1R in cell culture media samples.

Capture: HA723474, Human CSF-1-R Rabbit mAb [PSH12-66]
Detector: HA723475, Human CSF-1-R Rabbit mAb [PSH12-67]

The concentrations of CSF1R were measured in duplicates, interpolated from the CSF1R 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).

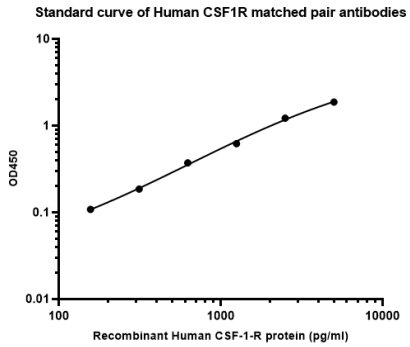

Fig4: Sandwich ELISA analysis of Human CSF-1-R matched pair antibodies

Capture: HA723477, Human CSF-1-R Rabbit mAb [PSH12-68]
Detector: HA723474, Human CSF-1-R Rabbit mAb [PSH12-66]

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA723477) 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 CSF-1-R protein (HA211149) starting from 5,000 pg/ml to 0 pg/ml and detect antibody (HA723474, 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.

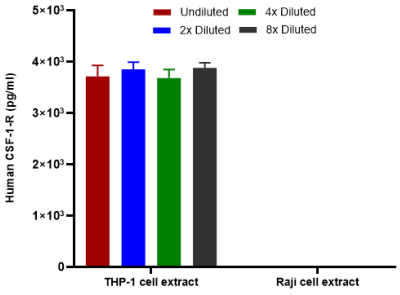

Fig5: Interpolated concentrations of native CSF1R in THP-1 and Raji cell extract samples based on a 1000 µg/ml extract load.

Capture: HA723477, Human CSF-1-R Rabbit mAb [PSH12-68]
Detector: HA723474, Human CSF-1-R Rabbit mAb [PSH12-66]

Interpolated concentration of native CSF1R was measured in duplicate at different sample concentrations. The interpolated dilution factor corrected values were plotted (mean +/- SD, n=2). The mean CSF1R concentration was determined to be 3782 pg/mL in THP-1 cell extract and undetectable in Raji cell extract.

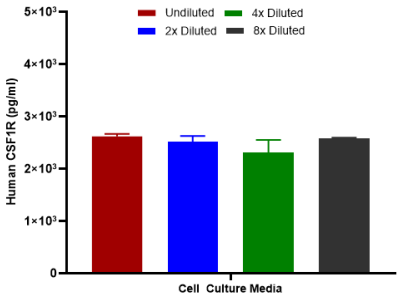

Fig6: Interpolated concentrations of spiked CSF1R in cell culture media samples.

Capture: HA723477, Human CSF-1-R Rabbit mAb [PSH12-68]
Detector: HA723474, Human CSF-1-R Rabbit mAb [PSH12-66]

The concentrations of CSF1R were measured in duplicates, interpolated from the CSF1R 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. Chadarevian JP et al. Engineering an inhibitor-resistant human CSF1R variant for microglia replacement. J Exp Med. 2023 Mar
2. Adams RC et al. CSF1R inhibition promotes neuroinflammation and behavioral deficits during graft-versus-host disease in mice. Blood. 2024 Mar