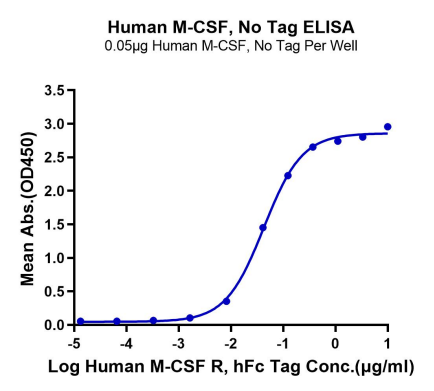
Bioactive HuPro®

CSF1 (Human) Recombinant Protein

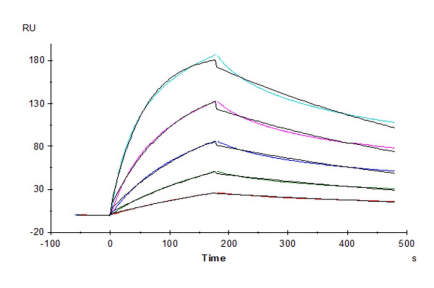
Catalog # P9897 Size 100 ug

Applications



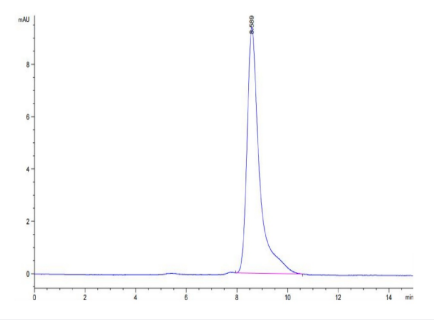
Enzyme-linked Immunoabsorbent Assay

Immobilized Human M-CSF at 0.5 ug/mL (100 uL/Well) on the plate. Dose response curve for Human M-CSF R, hFc Tag with the EC50 42.8 ng/mL determined by ELISA (QC Test).



Surface Plasmon Resonance

Human M-CSF, No Tag immobilized on CM5 Chip can bind Human M-CSF R, hFc Tag with an affinity constant of 2.06 nM as determined in SPR assay (Biacore T200).



SEC-HPLC

The purity of Human M-CSF is greater than 95% as determined by SEC-HPLC.

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Tris-Bis PAGE

Human M-CSF on Tris-Bis PAGE under reduced condition. The purity is greater than 95%.

Specification

Product Description	Human CSF1 (P09603-1, Glu33-Asn190) partial recombinant protein expressed in HEK293 cells.
Sequence	Glu33-Asn190
Host	Human
Theoretical MW (kDa)	20.5
Form	Lyophilized
Preparation Method	Mammalian cell (HEK293) expression system
Purity	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin Level	< 1 EU per 1 ug of protein (determined by LAL method)
Activity	The EC_{50} was 42.8 ng/mL, messured by ELISA at 0.5 ug/mL. The ED_{50} was 2.5 - 7.0 ng/mL, measured in a cell proliferation assay using RAW264.7 cells.The affinity constant of 2.06 nM as determined in SPR assay (Biacore T200).
Quality Control Testing	SEC-HPLC and Tris-Bis PAGE SEC-HPLC The purity of Human M-CSF is greater than 95% as determined by SEC-HPLC. Tris-Bis PAGE Human M-CSF on Tris-Bis PAGE under reduced condition. The purity is greater than 95%.
Recommend Usage	Biological Activity Cell proliferation assay ELISA SDS-PAGE SPR The optimal working dilution should be determined by the end user.
Storage Buffer	Lyophilized from sterile distilled Water is > 100 ug/mL
Storage Instruction	Store at 2°C to 8°C for 1 week. For long term storage, aliquot and store at -20°C to -80°C. Aliquot to avoid repeated freezing and thawing.

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Note	Result of bioactivity analysis

Applications

- Functional Study
- Enzyme-linked Immunoabsorbent Assay

  Immobilized Human M-CSF at 0.5 ug/mL (100 uL/Well) on the plate. Dose response curve for Human M-CSF R, hFc Tag with the EC50 42.8 ng/mL determined by ELISA (QC Test).
- SDS-PAGE
- Surface Plasmon Resonance

  Human M-CSF, No Tag immobilized on CM5 Chip can bind Human M-CSF R, hFc Tag with an affinity constant of 2.06 nM as determined in SPR assay (Biacore T200).

Gene Info — CSF1

Entrez GeneID	1435
Protein Accession#	P09603-1
Gene Name	CSF1
Gene Alias	MCSF, MGC31930
Gene Description	colony stimulating factor 1 (macrophage)
Omim ID	120420
Gene Ontology	Hyperlink
Gene Summary	The protein encoded by this gene is a cytokine that controls the production, differentiation, and function of macrophages. The active form of the protein is found extracellularly as a disulfide-linked homodimer, and is thought to be produced by proteolytic cleavage of membrane-bound precursors. The encoded protein may be involved in development of the placenta. Four transcript variants encoding three different isoforms have been found for this gene. [provided by RefSeq
Other Designations	OTTHUMP00000013362|OTTHUMP00000013363|OTTHUMP00000013364|colony stimulating factor 1|macrophage colony stimulating factor

Pathway

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- Cytokine-cytokine receptor interaction
- Hematopoietic cell lineage

Disease

- Alzheimer disease
- Cardiovascular Diseases
- Chorioamnionitis
- Coronary Artery Disease
- Diabetes Mellitus
- Edema
- Fetal Membranes
- Genetic Predisposition to Disease
- Inflammation
- Kidney Failure
- Neoplasms
- Obstetric Labor
- Osteitis Deformans
- Ovarian Neoplasms
- Periodontitis
- Pre-Eclampsia
- Premature Birth

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