Bioactive, Recombinant Human CSF2RA Protein Dimer, His-Avi Tag
Product Code: CSP-25172-03
For Research Use Only (RUO)

Protein Name
CSF2RA

Alternate Name(s)
granulocyte-macrophage colony-stimulating factor receptor alpha, GMCSFR-alpha, GMRα subunit, Cluster of Differentiation 116, CD116, CDw116, CSF2R, CSF2RAX, CSF2RAY, CSF2RX, CSF2RY, GM-CSF-R-alpha, GMCSFR, GMR, SMDP4, alphaGMR, GMR-alpha

Protein Construct
CSF2RA dimer protein contains a CSF2RA extracellular domain (UniProt# P15509) fused with a proprietary cis-dimer motif followed by a tandem His-Avi tag at the C-terminus. Expressed in HEK293T cell line.

SDS-Page Molecular Weight
89 kDa. The migration range of the heterodimer protein with glycosylation under non-reducing condition is 120~190 kDa on SDS PAGE.

Shipping Conditions
Frozen Dry Ice

Expression Host
HEK293T

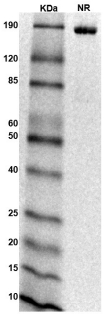
Purity
Greater than 90% dimer form as determined by SDS-PAGE under non-reducing condition

Amino Acid Range
E23-G320

Formulation
0.22μm filtered PBS, pH 7.4

Stability & Storage
-80^{0}C

SDS-PAGE



MW: Molecular Weight marker reduced condition
NR: CSF2Rα under non-reduced condition

The migration range of the heterodimer protein with glycosylation under non-reducing condition is 120~190 kDa on SDS PAGE.

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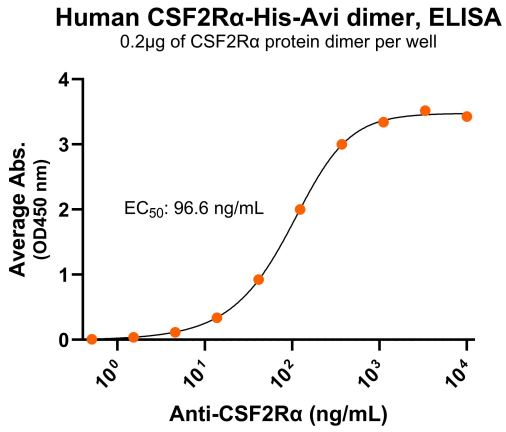
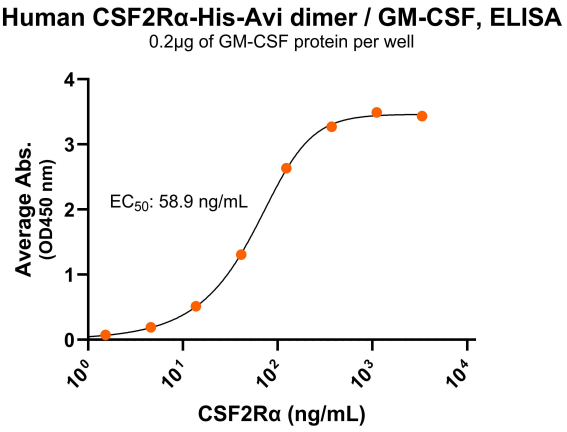
Bioactivity – Antibody Binding



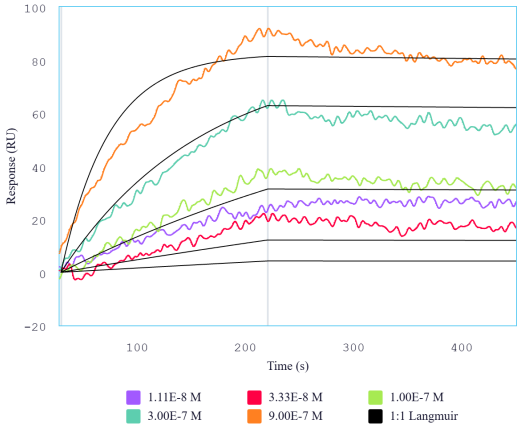
Immobilized human CSF2Rα protein dimer, His Tag (CSP-25172-03) at 2 μg/mL (100 μL/well) can bind anti-human CSF2Rα polyclonal antibody with half maximal effective concentration (EC50) range of 48.3-193.1 ng/mL (QC tested).

Bioactivity – Ligand Binding



Immobilized human GM-CSF at 2 μg/mL (100 μL/well) can bind anti-human CSF2Rα protein dimer, His Tag (CSP-25172-03) with half maximal effective concentration (EC50) range of 29.5-117.8 ng/mL (QC tested).

Bioactivity – SPR



Immobilized human GM-CSF can bind human CSF2Rα protein dimer, His Tag (CSP-25172-03) with a KD of 4.1-16.5 nM as determined by SPR.

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Background

Human colony stimulating factor 2 receptor subunit alpha (CSF2RA) is a Type 1 transmembrane glycoprotein. CSF2RA is also known as granulocyte-macrophage colony-stimulating factor receptor alpha (GMCSFR-alpha), GMRα subunit, and cluster of differentiation 116 (CD116). The CSF2RA extracellular domain contains two fibronectin type III (FN III) domains with a highly conserved WSXWS motif is present near the C-terminus of the second domain. CSF2RA is expressed on (cell types). CSF2RA is primarily located on neutrophils, eosinophils and monocytes/macrophages and is a receptor for granulocyte-macrophage colony-stimulating factor (GM-CSF). CSF2RA can form a heterodimer with CSF2RB and these heterodimers can form several multimers including a dodecamer. It has been found that CSF2RA specifically has tumor suppression characteristics that have made stimulating CSF2RA expression an emerging strategy in cancer therapy.