

APA090Hu01 200µg

Active Colony Stimulating Factor 1, Macrophage (MCSF)

Organism Species: *Homo sapiens* (Human)

Instruction manual

FOR IN VITRO USE AND RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Glu33~Ser496

Tags: Two N-terminal Tags, His-tag and GST-tag

Purity: >92%

Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 0.01% sarcosyl, 5%Trehalose and Proclin300.

Applications: Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 5.0

Predicted Molecular Mass: 80.2kDa

Accurate Molecular Mass: 80kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

```
EEVSEYCS HMI GSGHLQS
LQRLIDSQME TSCQITFEFV DQEQLKDPVC YLKKAFLLVQ DIMEDTMRFR
DNTPNIAIAIV QLQELSLRLK SCFTKDYEEH DKACVRTFYE TPLQLLEKVK
NVFNETKNLL DKDWNIFS KN CNNSFAECSS QDVVTKPDCN CLYPKAIPSS
DPASVSPHQP LAPSMAPVAG LTWEDSEGTE GSSLLPGEQP LHTVDPGSAK
QRPPRSTCQS FEPPETPVVK DSTIGGSPQP RPSVGAFNPG MEDILDSAMG
TNWVPEEASG EASEIPVPQG TELSPSRPGG GSMQTEPARP SNFLSASSPL
PASAKGQQPA DVTGTALPRV GVRPTGQDW NHTPQKTDHP SALLRDPPEP
GSPRISSLRP QGLSNPSTLS AQPQLSRSHS SGSVLPLGEL EGRRSTRDRR
SPAEPGGPA SEGAARPLPR FNSVPLTDTG HERQSEGSFS PQLQES
```

[ACTIVITY]

Macrophage Colony Stimulating Factor (M-CSF), also known as CSF-1, is a secreted cytokine which influences hematopoietic stem cells to differentiate into macrophages or other related cell types. M-CSF (or CSF-1) is a hematopoietic growth factor that is involved in the proliferation, differentiation, and survival of monocytes, macrophages, and bone marrow progenitor cells. It can also affect macrophages and monocytes in several ways, including stimulating increased phagocytic and chemotactic activity, and increased tumour cell cytotoxicity. The role of M-CSF is not only restricted to the monocyte/macrophage cell lineage. By interacting with its membrane receptor (CSF1R or M-CSF-R encoded by the *c-fms* proto-oncogene), M-CSF also modulates the proliferation of earlier hematopoietic progenitors and influence numerous physiological processes involved in immunology, metabolism, fertility and pregnancy. Besides, Colony Stimulating

Factor Receptor, Macrophage (M-CFS-R) has been identified as an interactor of M-CSF, thus a binding ELISA assay was conducted to detect the interaction of recombinant human M-CSF and recombinant human MCFSR. Briefly, M-CSF were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to M-CFS-R-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-M-CSF pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 °C. Finally, add 50µL stop solution to the wells and read at 450nm immediately. The binding activity of M-CSF and M-CFS-R was shown in Figure 1, and this effect was in a dose dependent manner.

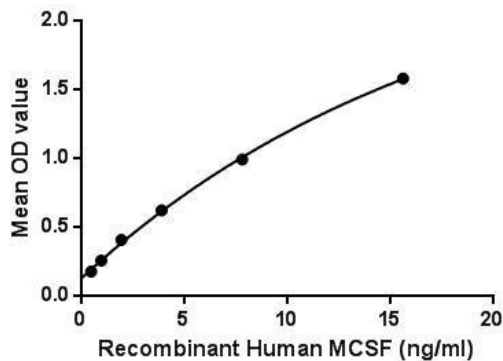


Figure 1. The binding activity of M-CSF with M-CFS-R.

[IDENTIFICATION]

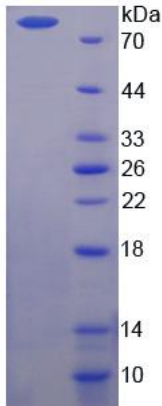


Figure 2. SDS-PAGE

Sample: Active recombinant MCSF, Human

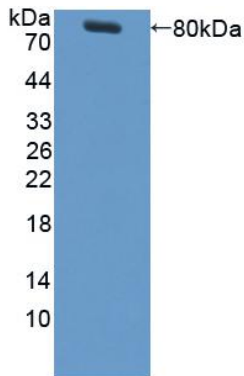


Figure 3. Western Blot

Sample: Recombinant MCSF, Human;

Antibody: Rabbit Anti-Human MCSF Ab (PAA090Hu01)

[IMPORTANT NOTE]

The kit is designed for in vitro and research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.