



Recombinant human CD14, soluble

20190801BB



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	100-406
Size:	50 µg
Lot. No.:	According to product label

Scientific Background

Gene-ID (NCBI):	929
Synonyms:	soluble CD14

CD14 is a cell surface-anchored glycoprotein that is expressed predominantly by monocytes and tissue macrophages. CD14 associates with MD-2 (LY-96) and TLR4 to form a receptor complex, which signals specifically in response to bacterial lipopolysaccharide (LPS) binding. The CD14/MD-2/TLR4 receptor complex signals via MyD88, TIRAP, and TRAF6, and ultimately activates NF-κB. CD14 also exists in a soluble form, designated as sCD14, which is capable of specifically binding LPS in the extracellular space. Recombinant sCD14 is a 331 amino acid glycoprotein comprising the extracellular portion of the CD14 receptor. The calculated molecular weight of Recombinant Human sCD14 is 35.6 kDa.

Sequence

```

TTPEPCELDD EDFRCVCNFS EPQPDWSEAF QCVSAVEVEI
HAGGLNLEFF LKRVDADADP RQYADTVKAL RVRRLTVGAA
QVPAQLLVGA LRVLAYSRK ELTLEDLKIT GTMPPLPLEA
TGLALSSLRL RNVSWATGRS WLAELQQWLK PGLKVLISIAQ
AHSFAFSCEQ VRAFPALTSL DLSDNPGLGE RGLMAALCPH
KFPAIQNLAL RNTGMETPTG VCAALAAAGV QPHSLDLSHN
SLRATVNPSA PRCMWSSALN SLNLSFAGLE QVPKGLPAKL
RVLDLSCNRL NRAPQPDELP EVDNLTLDGN PFLVPGTALP
HEGMNSGVV P

```

Database References

Protein RefSeq:	NP_000582.1
Uniprot ID:	P08571
mRNA RefSeq:	NM_000591.3

Product Specifications

Expressed in	HEK293 cells
Purity	>95% by SDS-PAGE & HPLC analysis
Endotoxin level	< 0.1 ng /µg of protein (<1EU/µg).
Formulation	Lyophilized (10mM Sodium Phosphate, pH 7.5)
Length (aa):	331
MW:	35.6 kDa

Stability: The lyophilized protein is stable at room temperature for 1 month and at 4°C for 6 months. Reconstituted working aliquots are stable for 1 week at 2°C to 8°C and for 3 months at -20°C to -80°C.

Reconstitution: Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. *Do not vortex.* This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.



AVOID REPEATED FREEZE AND THAW CYCLES!

Biological Activity: Determined by the dose dependent activation of NF-κB in a RAW264 cell line based reporter system, using a sCD14 concentration range of 20 ng/µl to 200 ng/µl. The NF-κB activation is enhanced when the assay is done in the presence of 0.25 ng/µl to 1.0 ng/µl bacterial LPS.