

# Human CD14 Protein (His Tag)

Catalog Number: 10073-H08H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

CD14 antigen; monocyte differentiation antigen CD14

### Protein Construction:

A DNA sequence encoding the mature form of human CD14 (NP\_000582.1) (Met 1-Met 344) was fused with a polyhistidine tag at the C-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 97 % as determined by SDS-PAGE

### Bio Activity:

Measured by its ability to enhance LPS-stimulated IL-8 secretion by THP-1 human acute monocytic leukemia cells. The ED<sub>50</sub> for this effect is typically 25-95 ng/mL.

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Thr 20

### Molecular Mass:

The secreted recombinant human CD14 consists of 336 amino acids and has a predicted molecular mass of 36.5 kDa. The apparent molecular mass of rhCD14 is approximately 45 kDa in SDS-PAGE under reducing conditions due to glycosylation.

### Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

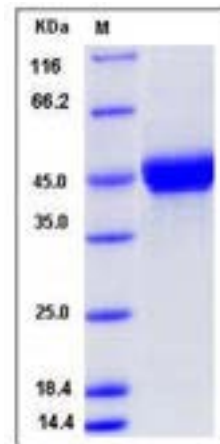
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

The cluster of differentiation (CD) system is commonly used as cell markers in immunophenotyping. Different kinds of cells in the immune system can be identified through the surface CD molecules which associating with the immune function of the cell. There are more than 320 CD unique clusters and subclusters have been identified. Some of the CD molecules serve as receptors or ligands important to the cell through initiating a signal cascade which then alter the behavior of the cell. Some CD proteins do not take part in cell signal process but have other functions such as cell adhesion. Cluster of differentiation 14 (CD14) is a member of the CD system. It takes its name from its inclusion in the CD molecule surface marker proteins. CD14 exists in two forms: a form anchored into the membrane or a soluble form. CD14 was found expressed in macrophages, neutrophil granulocyte and dendritic cells. The major function is serve as a co-receptor (along with TLR4 and MD-2) for the bacterial lipopolysaccharide (LPS) and other pathogen-associated molecular patterns.

## References

1. Zola H, *et al.* (2007) CD molecules 2006-human cell differentiation molecules. *J Immunol Methods.* 318 (1-2): 1-5.
2. Ho IC, *et al.* (2009) GATA3 and the T-cell lineage: essential functions before and after T-helper-2-cell differentiation. *Nat Rev Immunol.* 9 (2): 125-35.
3. Matesanz-Isabel J, *et al.* (2011) New B-cell CD molecules. *Immunology Letters.* 134 (2): 104-12.

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