Recombinant Human CD14  
Catalog Number: 383-CD

DESCRIPTION
Source Chinese Hamster Ovary cell line, CHO-derived  
Thr20-Cys352  
Accession # P08571

N-terminal Sequence Analysis  
Thr20

Predicted Molecular Mass  
35.8 kDa

SPECIFICATIONS
SDS-PAGE  
50 kDa, reducing conditions

Activity  
Measured by its ability to enhance LPS-stimulated IL-8 secretion by THP-1 human acute monocytic leukemia cells. The ED₅₀ for this effect is 0.75-4.5 ng/mL.

Endotoxin Level  
<1.0 EU per 1 μg of the protein by the LAL method.

Purity  
>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation  
Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE
Reconstitution  
Reconstitute at 100 μg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.

Shipping  
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage  
Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND
CD14 is a 55 kDa cell surface glycoprotein that is preferentially expressed on monocytes/macrophages. The human CD14 cDNA encodes a 375 amino acid (aa) residue precursor protein with a 19 aa signal peptide and a C-terminal hydrophobic region characteristic for glycosylphosphatidylinositol (GPI)-anchored proteins. Human CD14 has four potential N-linked glycosylation sites and also bears O-linked carbohydrates. The amino acid sequence of human CD14 is approximately 65% identical with the mouse, rat, rabbit, and bovine proteins. CD14 is a pattern recognition receptor that binds lipopolysaccharides (LPS) and a variety of ligands derived from different microbial sources. The binding of CD14 with LPS is catalyzed by LPS-binding protein (LBP). The toll-like-receptors have also been implicated in the transduction of CD14-LPS signals. Similar to other GPI-anchored proteins, soluble CD14 can be released from the cell surface by phosphatidylinositol-specific phospholipase C. Soluble CD14 has been detected in serum and body fluids. High concentrations of soluble CD14 have been shown to inhibit LPS-mediated responses. However, soluble CD14 can also potentiate LPS response in cells that do not express cell surface CD14.

References: