Biotinylated Human CD14 Protein, His,Avitag™

Catalog # CD4-H8228

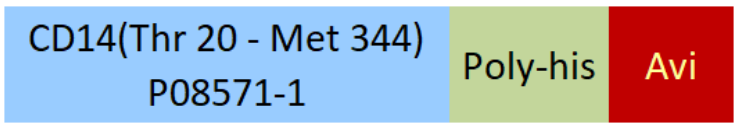
Synonym

CD14

Source

Biotinylated Human CD14, His,Avitag (CD4-H8228) is expressed from human 293 cells (HEK293). It contains AA Thr 20 - Met 344 (Accession # P08571-1). Predicted N-terminus: Thr 20

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 38.6 kDa. The protein migrates as 45-55 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Biotinylation

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Biotin:Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

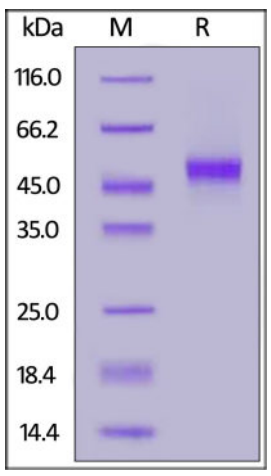
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Biotinylated Human CD14, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Background

Cluster of differentiation 14 (CD14), is a cell surface glycoprotein, and is a is a component of the innate immune system. CD14 is a myelomonocytic differentiation antigen preferentially expressed on monocytes, macrophages, and activated granulocytes. CD14 exists in two forms. Either it is anchored into the membrane by a

glycosylphosphatidylinositol tail (mCD14) or it appears in a soluble form (sCD14). Soluble CD14 either appears after shedding of mCD14 (48 kDa) or is directly secreted from intracellular vesicles (56 kDa). CD14 acts as a co-receptor (along with the Toll-like receptor TLR 4 and MD-2) for the detection of bacterial lipopolysaccharide (LPS). CD14 can bind LPS only in the presence of lipopolysaccharide-binding protein (LBP). CD14 has been proposed to be involved in various biological processes, including transportation of other lipids, cell-cell interaction during different immune responses, as well as recognition of apoptotic cells. Although LPS is considered its main ligand, CD14 also recognizes other pathogen-associated molecular patterns. CD14+ cells are monocytes that can differentiate into a host of different cells. CD14 has been shown to interact with Lipopolysaccharide-binding protein.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.