Technical Data Sheet

Purified Rat Anti-Human sCD14

Product Information

Material Number:	**551403**
Alternate Name:	Soluble CD14
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	55-3
Immunogen:	Human CD14 Recombinant Protein
Isotype:	Rat IgG2a, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 55-3 monoclonal antibody reacts with human CD14. CD14 is a 53 - 55 kDa cell surface glycoprotein that is expressed by monocytes, macrophages, and activated granulocytes as a glycophosphatidylinositol-linked protein. CD14 functions as a receptor for lipopolysaccharide (LPS, endotoxin) when LPS is bound to LBP (LPS binding protein). Soluble forms of CD14 (sCD14) can be detected either in serum or in supernatants from cell cultures. Soluble CD14 is produced either by shedding of membrane CD14 or by release from cells before addition of the GPI anchor. Both membrane and sCD14 function to enhance cell activation by LPS. Binding of LPS to CD14 activates monocytes or macrophages to produce cytokines and express adhesive proteins and low molecular weight proinflammatory mediators. Non-CD14 expressing cells, such as endothelial cells, can be activated by a complex of LPS and sCD14. Serum levels of sCD14 increase in association with sepsis, infectious disease, autoimmunity, and allergic disorders. The gene for human CD14 has been cloned and sequenced and recombinant sCD14 has been shown to be protective against LPS-induced lethality. The immunogen used to generate the 55-3 hybridoma was purified, soluble recombinant human CD14 protein.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at 4° C.

Application Notes

Application

ELISA Capture	Routinely Tested

Recommended Assay Procedure:

ELISA Capture: The purified 55-3 antibody (Cat. No. 551403) is useful as a capture antibody for a sandwich ELISA for measuring human soluble CD14 protein levels. Purified 55-3 antibody can be paired with the biotinylated 3-C39 anti-human sCD14 (Cat. No. 551405) as the detecting antibody, with recombinant soluble CD14 as the standard. Purified 55-3 antibody should be titrated between 1-4 µg/ml to determine its optimal concentration for ELISA capture. To obtain linear standard curves, doubling dilutions of recombinant human soluble CD14, ranging from 2000 to 15 pg/ml are recommended for inclusion in each ELISA plate. For specific methodology, please visit our web site, www.bdbiosciences.com, and go to the protocols section or the chapter on ELISA in the Immune Function Handbook.

Suggested Companion Products

Catalog Number	Name	Size	Clone
551405	Biotin Mouse Anti-Human sCD14	0.5 mg	3-C39

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

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