Technical Data Sheet

Biotin Mouse Anti-Human sCD14

Product Information

Material Number:	**551405**
Alternate Name:	sCD14
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	3-C39
Immunogen:	Soluble Human CD14
Isotype:	Mouse IgG2a, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

Description

The 3-C39 monoclonal antibody reacts with human CD14. CD14 is a 53-55kDa cell surface glycoprotein that is expressed by mature 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-LBP complexes to CD14 activates monocytes or macrophages to produce and secrete cytokines and pro-inflammatory 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.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated with biotin under optimum conditions, and unreacted biotin was removed.

Application Notes

Application

ELISA Detection	Routinely Tested

Recommended Assay Procedure:

ELISA Detection: The Biotinylated 3-C39 (Cat. No. 551405) is useful as a detector antibody for a sandwich ELISA for measuring human soluble CD14 protein levels. Biotinylated 3-C39 can be paired with purified 55-3 anti-human sCD14 (Cat. No. 551403) as the capture antibody, with recombinant soluble CD14 as the standard. The detection antibody should be titrated between 0.5 - 1 µg/ml to determine its optimal concentration for ELISA detection. 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 the chapter on ELISA in the Immune Function Handbook, which is posted on our web site, www.bdbiosciences.com.

Suggested Companion Products

Catalog Number	Name	Size	Clone
551403	Purified Rat Anti-Human sCD14	0.5 mg	55-3
560418	Human Soluble CD14 Flex Set	100 Tests	(none)

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.

References

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