Mouse CD14 Alexa Fluor® 405-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # 159010

Catalog Number: FAB982V

100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse CD14 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 10% cross-reactivity with recombinant human CD14 is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 159010
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse CD14 Ala18-Pro345 (predicted) Accession # P10810
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	Mouse whole blood

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

CD14 is a 55 kDa cell surface glycoprotein that is preferentially expressed on monocytes/macrophages. The mouse CD14 cDNA encodes a 366 amino acid (aa) residue precursor protein with a 15 aa signal peptide and a C-terminal hydrophobic region characteristic for glycosylphosphatidyinositol (GPI)-anchored proteins. Mouse CD14 has five potential N-linked glycosylation sites and also bears O-linked carbohydrates. The amino acid sequence of mouse CD14 is approximately 65% and 82% identical to the human and rat proteins, respectively. 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 phosphatidyinositol-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:

1. Wright, S.D. *et al.* (1990) Science **249**:1431.
2. Pugin, J. *et al.* (1993) Proc. Natl. Acad. Sci. USA **90**:2744.
3. Beutler, B. (2000) Current Opinion in Immunology **12**:20.
4. Stelter, F. (2000) Chem. Immunol. **74**:25.

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