

DESCRIPTION

Species Reactivity	Human
Specificity	Detects recombinant human CD14 protein in Direct ELISA.
Source	Recombinant Monoclonal Rabbit IgG Clone # 3334A
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Synthetic peptide Accession # P08571
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

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 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:

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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