R&D SYSTEMS
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Human CD14 Biotinylated Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: BAF383

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CD14 in ELISAs and Western blots. In sandwich ELISAs, less than 0.2% cross-reactivity with recombinant mouse CD14 and Lipopolysaccharide is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human CD14 Thr20-Cys352 Accession # P08571
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

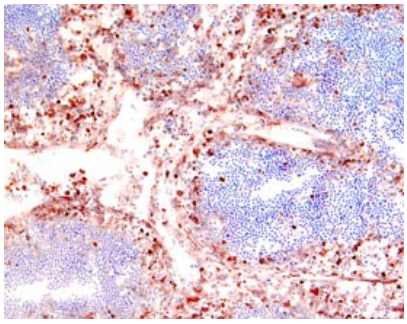
APPLICATIONS

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
Western Blot	0.1 µg/mL	Recombinant Human CD14 (Catalog # 383-CD)
Immunohistochemistry	5-15 µg/mL	See Below
Human CD14 Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Human CD14 Antibody (Catalog # MAB3833)
ELISA Detection	0.1-0.4 µg/mL	Human CD14 Biotinylated Antibody (Catalog # BAF383)
Standard		Recombinant Human CD14 (Catalog # 383-CD)

DATA

Immunohistochemistry



CD14 in Human Lymph Node. CD14 was detected in immersion fixed paraffin-embedded sections of human lymph node using 10 µg/mL Sheep Anti-Human CD14 Biotinylated Antigen Affinity-purified Polyclonal Antibody (Catalog # BAF383) overnight at 4 °C. Tissue was stained with the Anti-Sheep HRP-AEC Cell & Tissue Staining Kit (red; Catalog # CTS020) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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 glycosylphosphatidyinositol (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 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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