

## Anti-Human/Monkey CD14 Antibody [PSH28-58] - BSA and Azide free (Capture)

# HA724796



|                            |                                                       |
|----------------------------|-------------------------------------------------------|
| <b>Product Type:</b>       | Recombinant Rabbit monoclonal IgG, primary antibodies |
| <b>Species reactivity:</b> | Human, Cynomolgus monkey                              |
| <b>Applications:</b>       | ELISA(Cap)                                            |
| <b>Clone number:</b>       | PSH28-58                                              |

**Description:** CD14 is a 55-kDa protein found as a glycosylphosphatidylinositol (GPI)- anchored protein on the surface of monocytes, macrophages, and polymorphonuclear leukocytes, and as a soluble protein in the blood. Its main function is to serve as a receptor for lipopolysaccharide (LPS). CD14 functions as a receptor for LPS, resulting in the secretion of various proteins. An important component in the LPS activation of monocytes through the CD14 receptor is the "adapter molecule," lipopolysaccharide binding protein (LBP). There are two forms of CD14, a membrane-associated form (mCD14), and a soluble form (sCD14). mCD14 responds to LPS alone and facilitates the secretion of proteins, while cells not expressing mCD14 fail to respond to LPS. The cells that lack mCD14 respond to LPS/LBP in the presence of sCD14. Besides its role in endotoxin signaling, it has been proposed that CD14 is involved in the transportation of other lipids, cell-cell interactions during different immune responses, and recognition of apoptotic cells. CD14 is highly expressed on the surface of monocytes/macrophages and strongly up-regulated during the differentiation of monocytic precursor cells into mature monocytes. Therefore, CD14 has been commonly used as a differentiation marker for monocytes/macrophages. An antibody to CD14 also labels Langerhans' cells and dendritic cells.

**Immunogen:** Recombinant protein within Human CD14 aa 20-367 (HA211512).

**Positive control:** Recombinant Human CD14 protein (HA211512).

**Subcellular location:** Cell membrane, Secreted, Golgi apparatus, Membrane raft.

**Database links:** SwissProt: P08571 Human

**Recommended Dilutions:**

**ELISA(Cap)** Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH28-59] to Human/Monkey CD14 (Detecor) (HA724797) and Recombinant Human CD14 protein (HA211512) as the standard. The reference range value is 31.3-8,000 pg/mL.

**Storage Buffer:** 1\*PBS (pH7.4).

**Storage Instruction:** Store at 2-8℃. Avoid freeze.

**Purity:** Protein A affinity purified.

## Hangzhou Huaan Biotechnology Co., Ltd.

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Technical:0086-571-89986345

Service mail:support@huabio.cn

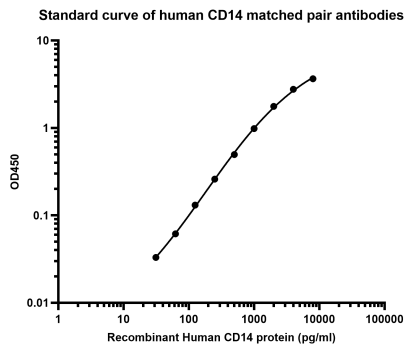
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Images

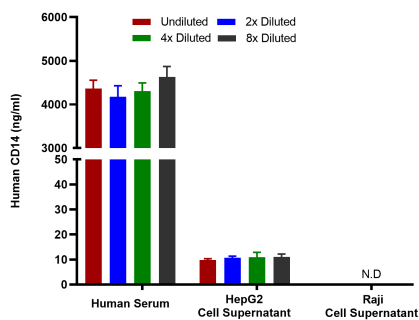
**Fig1:** Sandwich ELISA analysis of Human CD14 protein matched pair antibodies

Capture: HA724796, Human/Monkey CD14 Rabbit mAb [PSH28-58]  
Detector: HA724797, Human/Monkey CD14 Rabbit mAb [PSH28-59]



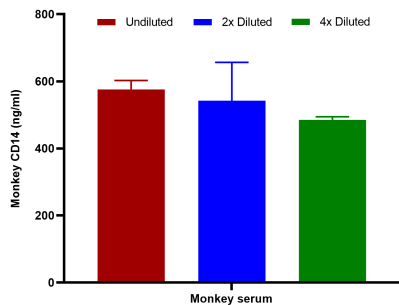
Elisa assay was performed by coating wells of a 96-well plate with 100  $\mu$ l per well of capture antibody (HA724796) diluted in carbonate/bicarbonate buffer, at a concentration of 2  $\mu$ g/mL overnight at 4 $^{\circ}$ C. Wells of the plate were washed, blocked with 150  $\mu$ l 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Human CD14 protein (HA211512) starting from 8,000 pg/mL to 0 pg/mL and detect antibody (HA724797, Biotin, 0.05  $\mu$ g/mL) for 1 hour at 30 $^{\circ}$ C with shaking. Then the plate was washed and incubated with 100  $\mu$ l per well of SA-HRP for 0.5 hour at 30 $^{\circ}$ C with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

**Fig2:** Interpolated concentrations of native CD14 in human samples.



Capture: HA724796, Human/Monkey CD14 Rabbit mAb [PSH28-58]  
Detector: HA724797, Human/Monkey CD14 Rabbit mAb [PSH28-59]

Interpolated concentration of native CD14 was measured in duplicate at different sample concentrations. Undiluted samples were 0.5% cell supernatant. The interpolated dilution factor corrected values were plotted (mean  $\pm$  SD, n=2). The mean CD14 concentration was determined to be 4,464 ng/mL in human serum and 10.6 ng/mL in HepG2 cell culture supernatant. There was no detectable signal in Raji cell culture supernatant.

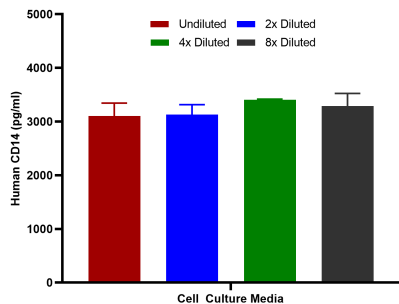


**Fig3:** Interpolated concentrations of native CD14 in cynomolgus monkey serum.

Capture: HA724796, Human/Monkey CD14 Rabbit mAb [PSH28-58]

Detector: HA724797, Human/Monkey CD14 Rabbit mAb [PSH28-59]

Interpolated concentration of native CD14 was measured in duplicate at different sample concentrations and interpolated from the CD14 standard curves. The interpolated dilution factor corrected values were plotted (mean +/- SD, n=2). The mean CD14 concentration was determined to be 535 ng/mL in cynomolgus monkey serum.



**Fig4:** Interpolated concentrations of spiked CD14 in cell culture media samples.

Capture: HA724796, Human/Monkey CD14 Rabbit mAb [PSH28-58]

Detector: HA724797, Human/Monkey CD14 Rabbit mAb [PSH28-59]

The concentrations of CD14 were measured in duplicates, interpolated from the CD14 standard curves and corrected for sample dilution. Diluted samples are as follows: 50% cell culture media with FBS. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2).

**Note:** All products are “FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE”.

### Background References

1. Dutertre CA et al. Deciphering the stromal and hematopoietic cell network of the adventitia from non-aneurysmal and aneurysmal human aorta. PLoS One 9:e89983 (2014).
2. Hsu RY et al. LPS-induced TLR4 signaling in human colorectal cancer cells increases beta1 integrin-mediated cell adhesion and liver metastasis. Cancer Res 71:1989-98 (2011).

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