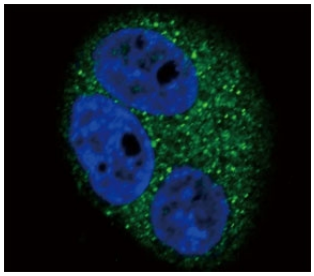
CD14 Rabbit Polyclonal Antibody / Lipopolysaccharide Receptor Antibody (F49568)

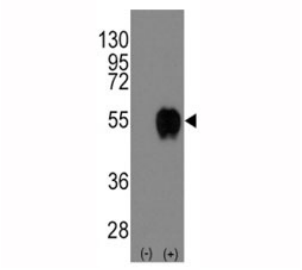
Catalog No.	Formulation	Size
F49568-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F49568-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

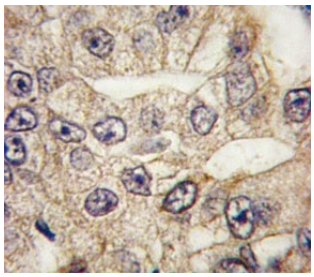
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Purified
UniProt	P08571
Localization	Cell surface, Secreted, Cytoplasmic (Golgi)
Applications	Western blot: 1:1000 IHC (Paraffin): 1:10-1:50 Immunofluorescence: 1:10-1:50 Flow Cytometry: 1:10-1:50
Limitations	This CD14 Rabbit Polyclonal Antibody / Lipopolysaccharide Receptor Antibody is available for research use only.



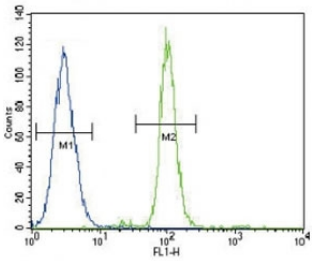
CD14 Rabbit Polyclonal Antibody by IF in Human A549 Cells. Confocal immunofluorescence analysis of human A549 cells using rabbit polyclonal CD14 antibody, followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). DAPI was used to counterstain nuclei (blue). Green fluorescence is distributed throughout the extranuclear regions of the cells, with a granular cytoplasmic appearance and areas of increased fluorescence intensity. The staining demonstrates detection of CD14, also known as the Lipopolysaccharide Receptor, in A549 cells. The fluorescence pattern is consistent with the reported cellular distribution of CD14, which can be associated with the plasma membrane and intracellular compartments.



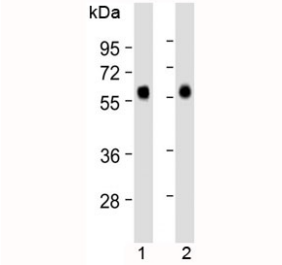
CD14 Rabbit Polyclonal Antibody by WB in Transfected Human 293 Cells. Western blot analysis of human 293 cell lysates using rabbit polyclonal CD14 antibody. Lane 1 contains nontransfected cells, while lane 2 contains cells transiently transfected with the human CD14 gene. Approximately 2 ug of lysate was loaded per lane. A prominent immunoreactive band is detected near 55 kDa in the CD14-transfected sample, consistent with the expected molecular weight of mature CD14. The corresponding signal is absent or substantially weaker in the nontransfected control. CD14 is a glycosylated protein, which can account for migration above its calculated polypeptide mass. This experiment provides useful transfection-based evidence supporting recognition of the Lipopolysaccharide Receptor.



CD14 Rabbit Polyclonal Antibody by IHC in Human Lung Carcinoma. Immunohistochemistry staining of FFPE human lung carcinoma tissue using rabbit polyclonal CD14 antibody. Brown immunoreactivity is visible throughout portions of the tissue, with prominent cytoplasmic staining and areas of increased intensity along cellular boundaries. The positively stained cells contain blue hematoxylin-counterstained nuclei, and the staining intensity varies across the field. This experiment demonstrates antibody reactivity in human lung carcinoma tissue. CD14, also known as the Lipopolysaccharide Receptor, is involved in innate immune recognition and may be expressed by different cell populations within the tumor microenvironment. The image alone does not establish the identity of the stained cells.



CD14 Rabbit Polyclonal Antibody by FACS in Human A549 Cells. Flow cytometry analysis of human A549 cells using rabbit polyclonal CD14 antibody, followed by FITC-conjugated goat anti-rabbit secondary antibody. The antibody-stained population (right histogram, green) exhibits a pronounced rightward fluorescence shift compared with the negative control (left histogram, blue). The distributions show clear separation, indicating increased antibody-associated fluorescence in the tested cells. This experiment supports the use of the antibody for detecting CD14-associated staining by flow cytometry. CD14 functions as a Lipopolysaccharide Receptor involved in bacterial endotoxin recognition and innate immune signaling.



CD14 Rabbit Polyclonal Antibody by WB in Human Liver and Lung Lysates. Western blot analysis of human liver lysate (lane 1) and human lung lysate (lane 2) using rabbit polyclonal CD14 antibody at a dilution of 1:2000. A prominent immunoreactive band is detected near 55-60 kDa in both samples, with the lung lysate producing a stronger signal. The observed migration is consistent with the expected molecular weight of mature CD14, which is approximately 40-55 kDa depending on glycosylation. CD14 contains multiple potential N-linked glycosylation sites, and differences in glycosylation may influence its electrophoretic mobility. These results demonstrate recognition of a protein consistent with the Lipopolysaccharide Receptor in two human tissue lysates.

Description

CD14 Rabbit Polyclonal Antibody recognizes CD14, a glycosylphosphatidylinositol (GPI)-anchored glycoprotein involved in innate immune recognition of microbial components. Also known as monocyte differentiation antigen CD14 and the lipopolysaccharide receptor, CD14 is prominently expressed by circulating monocytes, tissue macrophages, and selected dendritic cell populations. It functions as a pattern recognition co-receptor that facilitates cellular responses to bacterial lipopolysaccharide (LPS), making it an important marker for studying myeloid cell differentiation, macrophage activation, and host defense.

CD14 participates in bacterial endotoxin recognition through interactions with lipopolysaccharide-binding protein (LBP) and the Toll-like receptor 4 (TLR4)-MD-2 signaling complex. LBP transfers LPS to CD14, which promotes its delivery to TLR4-MD-2 and facilitates downstream signaling. This process activates NF-kappaB and interferon regulatory factor

pathways, resulting in the production of inflammatory cytokines, chemokines, and other mediators of innate immunity. CD14 also contributes to recognition of additional microbial components and participates in receptor internalization and endosomal signaling.

CD14 exists in membrane-associated and soluble forms. Membrane CD14 is particularly abundant on monocytes and macrophages, while soluble CD14 circulates in extracellular fluids and can facilitate LPS responses in cells with limited membrane CD14 expression. Expression levels vary during monocyte differentiation and macrophage activation, allowing CD14 to serve as a useful indicator of myeloid cell identity and functional state. A Lipopolysaccharide Receptor Antibody can help characterize CD14-positive populations and investigate their responses to microbial stimuli.

In immunological research, CD14 expression is frequently examined alongside CD68, CD11b, CD16, and other markers to characterize monocyte subsets and macrophage populations. Its involvement in bacterial endotoxin recognition also makes CD14 relevant to studies of sepsis, inflammatory disorders, and host-pathogen interactions. Detection of CD14 can provide information about receptor expression and distribution in experimental tissues and cell populations.

NSJ Bioreagents offers this rabbit polyclonal antibody for investigations of CD14 expression and innate immune signaling. A CD14 Rabbit Polyclonal Antibody supports research into monocyte and macrophage differentiation, microbial recognition, and inflammatory responses.

For an alternative antibody targeting the same monocyte and macrophage surface marker, see our CD14 Antibody LPSR/2385, a mouse monoclonal antibody featuring IHC, western blot, flow cytometry, and protein microarray validation.

Application Notes

Titration of the CD14 Rabbit Polyclonal Antibody / Lipopolysaccharide Receptor Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 54-83 from the human protein was used as the immunogen for this CD14 Rabbit Polyclonal Antibody.

Storage

Aliquot the CD14 Rabbit Polyclonal Antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

CD14 antibody, LPS Receptor antibody, Lipopolysaccharide Receptor antibody, Monocyte Marker antibody, Macrophage Marker antibody, Monocyte Differentiation Antigen CD14 antibody, Cluster of Differentiation 14 antibody, Myeloid Cell Marker antibody

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