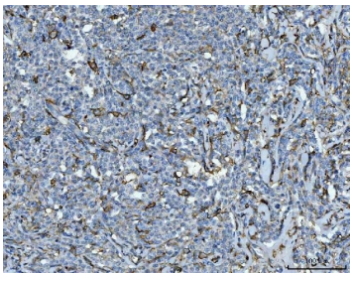
CD14 Polyclonal Antibody / Monocyte Marker Antibody (RQ6836)

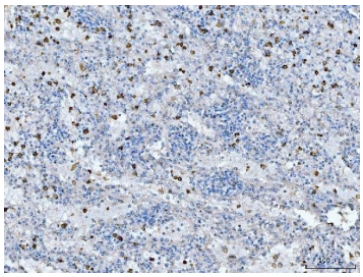
Catalog No.	Formulation	Size
RQ6836	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

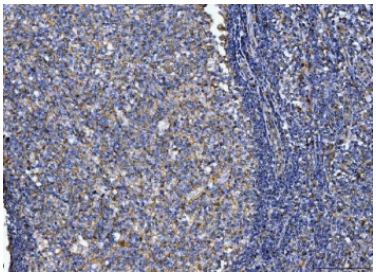
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P08571
Localization	Cytoplasmic, secreted
Applications	Immunohistochemistry (FFPE) : 2-5ug/ml Immunofluorescence (FFPE) : 5ug/ml Flow Cytometry : 1-3ug/million cells Direct ELISA : 0.1-0.5ug/ml
Limitations	This CD14 Polyclonal Antibody / Monocyte Marker Antibody is available for research use only.



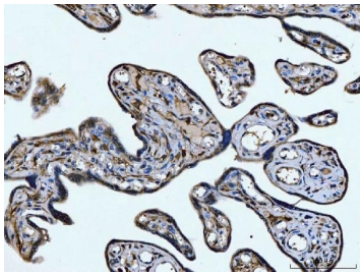
CD14 Polyclonal Antibody by IHC in Human Lymphadenoma. Immunohistochemistry staining of FFPE human lymphadenoma tissue using rabbit polyclonal CD14 antibody. Brown immunoreactivity is distributed among numerous cells throughout the tissue, with prominent staining along cell membranes and within the cytoplasm. The positive cells are interspersed with more weakly stained regions, producing a heterogeneous pattern. This distribution is consistent with CD14 expression in monocyte/macrophage populations and supports the use of this Monocyte Marker Antibody for investigating myeloid cells in lymphoid tissues. Heat-induced epitope retrieval was performed in EDTA buffer, pH 8, for 20 minutes.



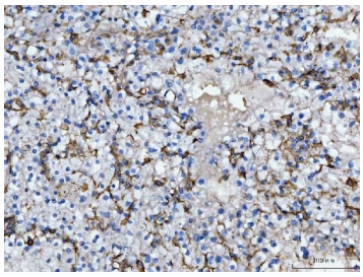
CD14 Polyclonal Antibody by IHC in Human Spleen. Immunohistochemistry staining of FFPE human spleen tissue using rabbit polyclonal CD14 antibody. Scattered brown-positive cells are visible throughout the tissue, with areas of increased staining density surrounding more lightly stained regions. Immunoreactivity is predominantly cytoplasmic and membranous, consistent with CD14 expression in resident monocytes and macrophages. The heterogeneous distribution reflects differences in CD14 expression among splenic cell populations. This experiment demonstrates detection of CD14 in human spleen, where mononuclear phagocytes contribute to immune surveillance and clearance of circulating material. Heat-induced epitope retrieval was performed in EDTA buffer, pH 8, for 20 minutes.



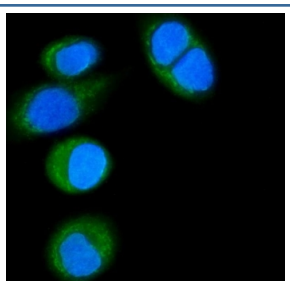
CD14 Polyclonal Antibody by IHC in Human Tonsil. Immunohistochemistry staining of FFPE human tonsil tissue using rabbit polyclonal CD14 antibody. Numerous brown-positive cells are concentrated in a broad region of the tissue, while adjacent densely packed lymphoid areas exhibit substantially weaker staining. The positive cells display predominantly membranous and cytoplasmic immunoreactivity, creating a clear contrast with the blue hematoxylin-counterstained lymphocytes. This distribution is consistent with CD14 expression in myeloid cell populations within tonsillar tissue. The image illustrates the utility of this Monocyte Marker Antibody for identifying CD14-positive cells within heterogeneous lymphoid structures. Heat-induced epitope retrieval was performed in EDTA buffer, pH 8, for 20 minutes.



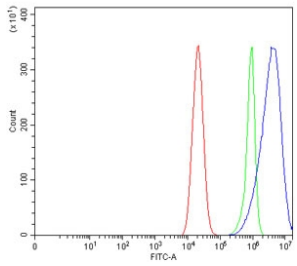
CD14 Polyclonal Antibody by IHC in Human Placenta. Immunohistochemistry staining of FFPE human placental tissue using rabbit polyclonal CD14 antibody. Prominent brown immunoreactivity outlines portions of the chorionic villi, with additional staining visible within villous stromal regions. The staining varies between individual villi, producing a heterogeneous pattern against the blue hematoxylin counterstain. CD14 expression in placental tissue is associated with immune cell populations, including macrophages involved in maternal-fetal immune regulation. The image demonstrates antibody reactivity within placental structures, although the staining pattern alone does not establish the identity of individual positive cells. Heat-induced epitope retrieval was performed in EDTA buffer, pH 8, for 20 minutes.



CD14 Polyclonal Antibody by IHC in Human Renal Cell Carcinoma. Immunohistochemistry staining of FFPE human renal cell carcinoma tissue using rabbit polyclonal CD14 antibody. Brown immunoreactivity is visible in numerous cells distributed throughout the tumor section, with staining concentrated along cellular borders and within portions of the cytoplasm. The intensity varies among cells, and several regions contain comparatively weakly stained cells. CD14 is associated with monocyte/macrophage populations, including tumor-associated macrophages that participate in inflammatory signaling within the tumor microenvironment. This experiment demonstrates antibody reactivity in renal carcinoma tissue, although the image alone cannot distinguish CD14-positive immune cells from other reactive cell populations. Heat-induced epitope retrieval was performed in EDTA buffer, pH 8, for 20 minutes.



CD14 Polyclonal Antibody by IF in Human SiHa Cells. Immunofluorescence staining of FFPE human SiHa cells using rabbit polyclonal CD14 antibody. Green fluorescence is visible predominantly in the cytoplasm and along the periphery of individual cells, surrounding blue DAPI-stained nuclei. The fluorescence intensity varies between cells, with relatively strong staining around several nuclei and less intense staining in other regions. The image demonstrates detectable CD14-associated fluorescence in the tested SiHa cells and supports the use of this Monocyte Marker Antibody for examining cellular CD14 distribution. Heat-induced epitope retrieval was performed by steaming samples in citrate buffer, pH 6, for 20 minutes.



CD14 Polyclonal Antibody by FACS in Human Caco-2 Cells. Flow cytometry analysis of human Caco-2 cells using rabbit polyclonal CD14 antibody at 1 ug per million cells following blocking with goat serum. The antibody-stained population (blue) exhibits a pronounced rightward fluorescence shift relative to the isotype control (green) and unstained cells (red). The blue and green distributions show relatively little overlap, indicating increased antibody-associated fluorescence under the experimental conditions. The histogram demonstrates detection of CD14-associated cell surface staining in Caco-2 cells and provides flow cytometry validation for this antibody. CD14, also known as the lipopolysaccharide receptor, participates in bacterial endotoxin recognition and innate immune signaling.

Description

CD14 Polyclonal Antibody recognizes CD14, a glycosylphosphatidylinositol (GPI)-anchored cell surface glycoprotein involved in innate immune recognition of microbial components. Also known as monocyte differentiation antigen CD14 and the lipopolysaccharide receptor, this protein is expressed predominantly by circulating monocytes, tissue macrophages, and selected dendritic cell populations. CD14 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 initiates downstream signaling. This process activates inflammatory pathways involving NF-kappaB and interferon regulatory factors, leading to the production of 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, making CD14 useful for characterizing myeloid cell populations and their functional states. A Monocyte Marker Antibody can help identify CD14-positive cells within heterogeneous tissues and experimental cell populations.

In immunological research, CD14 is frequently examined alongside CD68, CD11b, CD16, and other markers to investigate monocyte subsets, macrophage differentiation, and inflammatory responses. CD14 expression is also relevant to studies of bacterial infection, sepsis, and host-pathogen interactions. Immunohistochemical and immunofluorescent detection can reveal its distribution within tissues, while flow cytometry provides information about cell-associated expression.

NSJ Bioreagents offers this rabbit polyclonal antibody for investigations of human CD14 expression. The immunogen corresponds to amino acids 20-259 of human CD14, encompassing much of its extracellular region. A CD14 Polyclonal Antibody supports studies of monocyte identification, macrophage biology, and innate immune recognition.

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

Optimal dilution of the CD14 Polyclonal Antibody / Monocyte Marker Antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids T20-N259) was used as the immunogen for the CD14 Polyclonal Antibody.

Storage

After reconstitution, the CD14 Polyclonal Antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

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

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