CD204 Monoclonal Antibody (J5HTR3), eBioscience™

Product Details	
Size	100 µg
Species Reactivity	Human
Published Species	Human
Host/Isotype	Mouse / IgG1, kappa
Class	Monoclonal
Type	Antibody
Clone	J5HTR3
Conjugate	Unconjugated
Form	Liquid
Concentration	0.5 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS
Contains	0.09% sodium azide
Storage conditions	4° C, do not freeze
RRID	AB_2662676

Applications	Tested Dilution	Publications
Immunohistochemistry (Paraffin) (IHC (P))	0.5 µg/mL	-
Miscellaneous PubMed (Misc)	-	1 Publication

Product Specific Information

This monoclonal antibody J5HTR3 reacts with human CD204 also known as Macrophage Scavenger Receptor 1 (MSR1), Scavenger Receptor Type A (SR-A), or SCARA1. It is expressed by multiple populations of macrophages and dendritic cells. CD204 belongs to the class A family of scavenger receptors, a group of five homotrimetric transmembrane proteins that contain a short cytoplasmic tail and extracellular C -terminus. Other members of this family include: MARCO (SCARA2), CSR (SCARA3), SRCL (SCARA4) and SCARA5. CD204 binds and internalizes oxidized low density lipoproteins (LDL), which drives macrophage differentiation into foam cells, secretion of inflammatory cytokines, and development of atherosclerotic lesions. In addition to oxidized LDL, CD204 binds and uptakes a wide variety of macromolecules, including bacterial cell wall components, viral DNA, calciprotein complexes, apoptotic cells, and beta-amyloid fibrils. This broad binding specificity implicates CD204-expressing macrophages in a number of physiological processes and pathologies, such as host defense, inflammation, bone remodeling, atherosclerosis, sepsis, and Alzheimer's disease.

In humans, CD204 exists as 3 splice variants. The more ubiquitous full length isoform (type I, SR-AI), a shorter isoform (type II, SR-AII) that lacks the C-terminal cysteine-rich domain, and the shortest isoform (type III, SR-AIII). Isoforms I and II bind modified LDL with similar affinity, whereas isoform III is not expressed on the cell surface. This monoclonal antibody J5HTR3 binds both type I and type II isoforms (isoform III has not been tested).

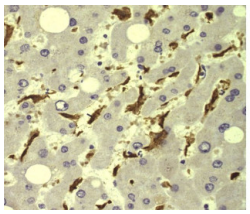
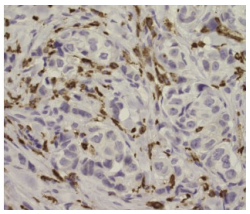
This J5HTR3 antibody has been tested by immunohistochemical staining of formalin-fixed paraffin embedded human tissue using high pH antigen retrieval and can be used at less than or equal to 0.5 µg/mL. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Purity: Greater than 90%, as determined by SDS-PAGE.

Aggregation: Less than 10%, as determined by HPLC.

Filtration: 0.2 µm post-manufacturing filtered.

Product Images For CD204 Monoclonal Antibody (J5HTR3), eBioscience™

CD204 Antibody (14-9054-82) in IHC (P)
Immunohistochemistry of formalin-fixed paraffin embedded human liver (left) or breast cancer (right) tissue using 0.5 µg/mL of Anti-Human CD204 Purified (Product # 14-9054-82), followed by Anti-Mouse IgG1 Biotin, Streptavidin HRP, and DAB visualization. Nuclei are counterstained with hematoxylin.

1 Reference

Miscellaneous PubMed (1)

Immunity

Deep spatial profiling of human COVID-19 brains reveals neuroinflammation with distinct microanatomical microglia-T-cell interactions.

"14-9054-82 was used in Mass cytometry to identify profound neuroinflammation with activation of innate and adaptive immune cells as correlates of COVID-19 neuropathology, with implications for potential therapeutic strategies."

Authors: Schwabenland M,Salié H,Tanevski J,Killmer S,Lago MS,Schlaak AE,Mayer L,Matschke J,Püschel K,Fitzek A, Ondruschka B,Mei HE,Boettler T,Neumann-Haefelin C,Hofmann M,Breithaupt A,Genc N,Stadelmann C,Saez-Rodriguez J,Bronsert P,Knobeloch KP,Blank T,Thimme R,Glatzel M,Prinz M,Bengsch B

Year
2021

Species
Human