SANTA CRUZ BIOTECHNOLOGY, INC.

CD206 (6A598): sc-70585

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD206, also known as macrophage mannose receptor type C (MMR or MRC1), is a type I membrane receptor protein. It is an phagocytic and endocytic receptor that can recognize carbohydrate ligands in target molecules. The extracellular portion of the protein includes eight C-type carbohydrate recognition domains (CRD) which are clustered together to achieve higher affinity binding to saccharides. CD206 is found on macrophages and on endothelial cells of the liver and is the only known example of a C-type lectin that contains multiple C-type CRDs. CD206 mediates the endocytosis of glycoproteins by macrophages and binds high-mannose structures on the surface of potentially pathogenic viruses, fungi and bacteria enabling them to be neutralized by phagocytic engulfment. During inflammation, CD206 is crucial for rapid clearance of several mannose-bearing serum glycoproteins but does not regulate the initiation of inflammation. CD206 is primarily expressed in mature tissue macrophages and immature dendritic cells, as well as hepatic and lymphatic endothelial cells, retinal pigmental epithelium (RPE) and mesangial cells.

REFERENCES

1. Kim, S.J., et al.1992. Organization of the gene encoding the human macrophage mannose receptor (MRC1). Genomics 14: 721-727.
2. Harris, N., et al. 1992. Characterization of the murine macrophage mannose receptor: demonstration that the downregulation of receptor expression mediated by interferon-γ occurs at the level of transcription. Blood 80: 2363-2373.

CHROMOSOMAL LOCATION

Genetic locus: MRC1 (human) mapping to 10p12.33; Mrc1 (mouse) mapping to 2 A2.

SOURCE

CD206 (6A598) is a mouse monoclonal antibody raised against CD206 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CD206 (6A598) is recommended for detection of CD206 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for CD206 siRNA (h): sc-45360, CD206 siRNA (m): sc-45361, CD206 shRNA Plasmid (h): sc-45360-SH, CD206 shRNA Plasmid (m): sc-45361-SH, CD206 shRNA (h) Lentiviral Particles: sc-45360-V and CD206 shRNA (m) Lentiviral Particles: sc-45361-V.

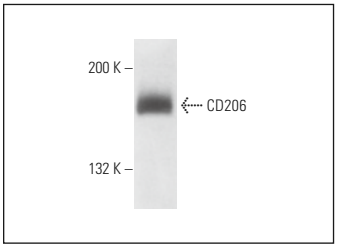
Molecular Weight of CD206: 160-170 kDa.

Positive Controls: human lung extract: sc-363767, human liver extract: sc-363766 or human kidney extract: sc-363764.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



CD206 (6A598): sc-70585. Western blot analysis of CD206 expression in human lung tissue extract.

SELECT PRODUCT CITATIONS

1. Soldano, S., et al. 2016. Alternatively activated (M2) macrophage phenotype is inducible by endothelin-1 in cultured human macrophages. PLoS ONE 11: e0166433.
2. Luo, Y., et al. 2020. Inhibition of EZH2 (enhancer of zeste homolog 2) attenuates neuroinflammation via H3k27me3/SOCS3/TRAF6/NFκB (trimethylation of histone 3 lysine 27/suppressor of cytokine signaling 3/tumor necrosis factor receptor family 6/nuclear factor-κB) in a rat model of subarachnoid hemorrhage. Stroke 51: 3320-3331.
3. Wang, Q., et al. 2021. LncRNA-Cox2 regulates macrophage polarization and inflammatory response through the CREB-C/EBPβ signaling pathway in septic mice. Int. Immunopharmacol. 101: 108347.
4. Mali, A.S. and Novotny, J. 2022. Opioid receptor activation suppresses the neuroinflammatory response by promoting microglial M2 polarization. Mol. Cell. Neurosci. 121: 103744.
5. Hong, S.M., et al. 2022. Hyperelastic, shape-memorable, and ultra-cell-adhesive degradable polycaprolactone-polyurethane copolymer for tissue regeneration. Bioeng. Transl. Med. 7: e10332.
6. Shi, Y., et al. 2023. Human menstrual blood-derived endometrial stem cells promote functional recovery by improving the inflammatory microenvironment in a mouse spinal cord injury model. Cell Transplant. 32: 9636897231154579.
7. Su, Y., et al. 2023. Regulatory effects of three-dimensional cultured lipopolysaccharide-pretreated periodontal ligament stem cell-derived secretome on macrophages. Int. J. Mol. Sci. 24: 6981.
8. Deng, S., et al. 2023. Recruitment of regulatory T cells with rCCL17 promotes M2 microglia/macrophage polarization through TGFβ/TGFβR/Smad2/3 pathway in a mouse model of intracerebral hemorrhage. Exp. Neurol. 367: 114451.

CONJUGATES

See **CD206 (D-1): sc-376108** for CD206 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.