SANTA CRUZ BIOTECHNOLOGY, INC.

CD206 (MR5D3): sc-58987

BACKGROUND

CD206, also known as macrophage mannose receptor type C (MMR or MRC1), is a type I membrane receptor protein. CD206 is a 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 (mouse) mapping to 2 A2.

SOURCE

CD206 (MR5D3) is a rat monoclonal antibody raised against CD206 of mouse origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD206 (MR5D3) is available conjugated fluorescein (sc-58987 FITC, 100 tests in 2 ml), for IF, IHC(P) and FCM.

APPLICATIONS

CD206 (MR5D3) is recommended for detection of CD206 of mouse 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 (m): sc-45361, CD206 shRNA Plasmid (m): sc-45361-SH and CD206 shRNA (m) Lentiviral Particles: sc-45361-V.

Molecular Weight of CD206: 160-170 kDa.

STORAGE

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

SELECT PRODUCT CITATIONS

1. Sindrilaru, A., et al. 2011. An unrestrained proinflammatory M_1 macrophage population induced by iron impairs wound healing in humans and mice. J. Clin. Invest. 121: 985-997.
2. Jensen, K.D., et al. 2011. Toxoplasma polymorphic effectors determine macrophage polarization and intestinal inflammation. Cell Host Microbe 9: 472-483.
3. Li, H., et al. 2013. Targeting annexin A7 by a small molecule suppressed the activity of phosphatidylcholine-specific phospholipase C in vascular endothelial cells and inhibited atherosclerosis in apolipoprotein E?/? mice. Cell Death Dis. 4: e806.
4. Mounier, R., et al. 2013. AMPKα1 regulates macrophage skewing at the time of resolution of inflammation during skeletal muscle regeneration. Cell Metab. 18: 251-264.
5. Hunt, L.C., et al. 2013. An anti-inflammatory role for leukemia inhibitory factor receptor signaling in regenerating skeletal muscle. Histochem. Cell Biol. 139: 13-34.
6. Gao, S., et al. 2014. Mouse bone marrow-derived mesenchymal stem cells induce macrophage M_2 polarization through the nuclear factor-κB and signal transducer and activator of transcription 3 pathways. Exp. Biol. Med. 239: 366-375.
7. Li, H., et al. 2015. Cigarette smoke extract-treated mast cells promote alveolar macrophage infiltration and polarization in experimental chronic obstructive pulmonary disease. Inhal. Toxicol. 27: 822-831.
8. Robinson, S., et al. 2016. Microstructural and microglial changes after repetitive mild traumatic brain injury in mice. J. Neurosci. Res. E-published.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.