

CD206 (3H1994): sc-70586

BACKGROUND

CD206, also known as macrophage mannose receptor type C (MMR or MRC1), is a type I membrane receptor protein. It 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 pigmented epithelium (RPE) and mesangial cells.

REFERENCES

- Kim, S.J., et al. 1992. Organization of the gene encoding the human macrophage mannose receptor (MRC1). *Genomics* 14: 721-727.
- 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.
- Taylor, M.E., et al. 1992. Contribution to ligand binding by multiple carbohydrate-recognition domains in the macrophage mannose receptor. *J. Biol. Chem.* 267: 1719-1726.
- Eichbaum, Q., et al. 1994. Assignment of the human macrophage mannose receptor gene (MRC1) to 10p13 by *in situ* hybridization and PCR-based somatic cell hybrid mapping. *Genomics* 22: 656-658.
- Harris, N., et al. 1994. The exon-intron structure and chromosomal localization of the mouse macrophage mannose receptor gene *Mrc1*: identification of a ricin-like domain at the N-terminus of the receptor. *Biochem. Biophys. Res. Commun.* 198: 682-692.

CHROMOSOMAL LOCATION

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

SOURCE

CD206 (3H1994) is a mouse monoclonal antibody raised against CD206 of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

CD206 (3H1994) 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 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ 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.

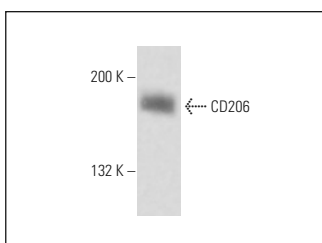
Molecular Weight of CD206: 160-170 kDa.

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

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CD206 (3H1994): sc-70586. Western blot analysis of CD206 expression in human kidney tissue extract.

SELECT PRODUCT CITATIONS

- Li, Y., et al. 2020. Scutellarein inhibits the development of colon cancer via Cdc4-mediated RAGE ubiquitination. *Int. J. Mol. Med.* 45: 1059-1072.

RESEARCH USE

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

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.