SANTA CRUZ BIOTECHNOLOGY, INC.

CD206 (C-10): sc-376232

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.

CHROMOSOMAL LOCATION

Genetic locus: MRC1 (human) mapping to 10p12.33.

SOURCE

CD206 (C-10) is a mouse monoclonal antibody raised against amino acids 1090-1389 mapping within an extracellular domain of CD206 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD206 (C-10) is available conjugated to agarose (sc-376232 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376232 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376232 PE), fluorescein (sc-376232 FITC), Alexa Fluor® 488 (sc-376232 AF488), Alexa Fluor® 546 (sc-376232 AF546), Alexa Fluor® 594 (sc-376232 AF594) or Alexa Fluor® 647 (sc-376232 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376232 AF680) or Alexa Fluor® 790 (sc-376232 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD206 (C-10) is recommended for detection of CD206 of human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

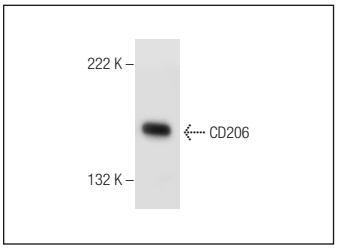
Molecular Weight of CD206: 160-170 kDa.

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

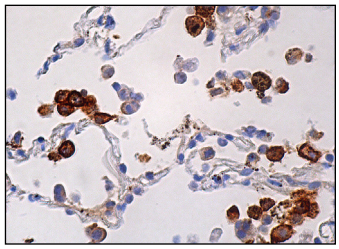
STORAGE

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

DATA



CD206 (C-10): sc-376232. Western blot analysis of CD206 expression in human liver tissue extract.



CD206 (C-10): sc-376232. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic and membrane staining of macrophages.

SELECT PRODUCT CITATIONS

1. Holder, G.E., et al. 2014. Expression of the mannose receptor CD206 in HIV and SIV encephalitis: a phenotypic switch of brain perivascular macrophages with virus infection. J. Neuroimmune Pharmacol. 9: 716-726.
2. Lee, R., et al. 2017. Deficient adipogenesis of scleroderma patient and healthy African American monocytes. Front. Pharmacol. 8: 174.
3. Zeng, J., et al. 2018. Tumor-associated macrophages recruited by periostin in intrahepatic cholangiocarcinoma stem cells. Oncol. Lett. 15: 8681-8686.
4. Court, M., et al. 2019. 3D type I collagen environment leads up to a reassessment of the classification of human macrophage polarizations. Biomaterials 208: 98-109.
5. Sun, C., et al. 2020. ADAM17-regulated CX3CL1 expression produced by bone marrow endothelial cells promotes spinal metastasis from hepatocellular carcinoma. Int. J. Oncol. 57: 249-263.
6. Daghian, S.G., et al. 2021. Biological fabrication and electrostatic attractions of new layered silver/talc nanocomposite using *Lawsonia inermis L.* and its chitosan-capped inorganic/organic hybrid: investigation on acceleration of *Staphylococcus aureus* and *Pseudomonas aeruginosa* infected wound healing. Mater. Sci. Eng. C Mater. Biol. Appl. 128: 112294.
7. Kercheva, M., et al. 2022. Macrophages of the "heart-kidney" axis: their dynamics and correlations with clinical data and outcomes in patients with myocardial infarction. J. Pers. Med. 12: 127.
8. Hong, Y., et al. 2022. High-frequency repetitive transcranial magnetic stimulation (rTMS) protects against ischemic stroke by inhibiting M1 microglia polarization through let-7b-5p/HMGA2/NFκB signaling pathway. BMC Neurosci. 23: 49.

RESEARCH USE

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