SANTA CRUZ BIOTECHNOLOGY, INC.

CD206 (D-1): sc-376108

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 (D-1) 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_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD206 (D-1) is available conjugated to agarose (sc-376108 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376108 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376108 PE), fluorescein (sc-376108 FITC), Alexa Fluor® 488 (sc-376108 AF488), Alexa Fluor® 546 (sc-376108 AF546), Alexa Fluor® 594 (sc-376108 AF594) or Alexa Fluor® 647 (sc-376108 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376108 AF680) or Alexa Fluor® 790 (sc-376108 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD206 (D-1) 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.

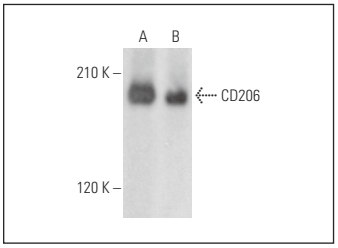
Molecular Weight of CD206: 160-170 kDa.

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

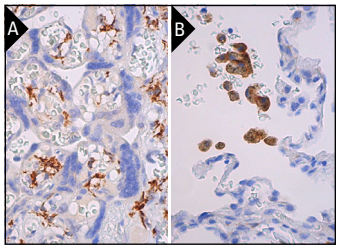
STORAGE

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

DATA



CD206 (D-1): sc-376108. Western blot analysis of CD206 expression in human lung (**A**) and human fetal liver (**B**) tissue extracts.



CD206 (D-1): sc-376108. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of Hofbauer cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic staining of macrophages (**B**).

SELECT PRODUCT CITATIONS

1. He, L. and Marneros, A.G. 2014. Doxycycline inhibits polarization of macrophages to the proangiogenic M2-type and subsequent neovascularization. J. Biol. Chem. 289: 8019-8028.
2. Woo, J.H., et al. 2017. IL-6 secretion from alternatively activated macrophages promotes the migration of endometriotic epithelial cells. Biol. Reprod. 97: 660-670.
3. Wang, Q., et al. 2018. Vascular niche IL-6 induces alternative macrophage activation in glioblastoma through HIF-2α. Nat. Commun. 9: 559.
4. Frión-Herrera, Y., et al. 2019. Nemorosone inhibits the proliferation and migration of hepatocellular carcinoma cells. Life Sci. 235: 116817.
5. Arlt, A., et al. 2020. High CD206 levels in Hodgkin lymphoma-educated macrophages are linked to matrix-remodeling and lymphoma dissemination. Mol. Oncol. 14: 571-589.
6. Tavares Pereira, M., et al. 2021. Selected uterine immune events associated with the establishment of pregnancy in the dog. Front. Vet. Sci. 7: 625921.
7. Sicherre, E., et al. 2021. Non-specific binding, a limitation of the immunofluorescence method to study macrophages *in situ*. Genes 12: 649.
8. Li, N., et al. 2022. Myoglobin promotes macrophage polarization to M1 type and pyroptosis via the RIG-I/Caspase1/GSDMD signaling pathway in CS-AKI. Cell Death Discov. 8: 90.
9. Fan, W., et al. 2023. Human epicardial adipose tissue inflammation correlates with coronary artery disease. Cytokine 162: 156119.
10. Caratti, G., et al. 2023. Glucocorticoid activation of anti-inflammatory macrophages protects against insulin resistance. Nat. Commun. 14: 2271.

RESEARCH USE

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