SANTA CRUZ BIOTECHNOLOGY, INC.

CD163 (GHI/61): sc-20066

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD163, also designated M130, is a macrophage-associated antigen that is a member of the scavenger receptor cysteine-rich (SRCR) superfamily. It is highly expressed on macrogphages and to a lesser extent on monocytes. The acute phase-regulated and signal-inducing macrophage protein, CD163, is a receptor that scavenges hemoglobin by mediating endocytosis of haptoglobin-hemoglobin complexes. CD163 binds only haptoglobin and hemoglobin in complex, which indicates the exposure of a receptor-binding neoepitope. The receptor-ligand interaction is calcium-dependent and of high affinity. The existence of several CD163 isoforms, which differ in the structure of their cytoplasmic domains and putative phosphorylation sites, suggests that these isoforms also differ in their signaling mechanism. The gene which encodes CD163 maps to human chromosome 12p13.31.

CHROMOSOMAL LOCATION

Genetic locus: CD163 (human) mapping to 12p13.31.

SOURCE

CD163 (GHI/61) is a mouse monoclonal antibody raised against hairy cell leukaemia.

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.

CD163 (GHI/61) is available conjugated to agarose (sc-20066 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-20066 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-20066 PE), fluorescein (sc-20066 FITC), Alexa Fluor® 488 (sc-20066 AF488), Alexa Fluor® 546 (sc-20066 AF546), Alexa Fluor® 594 (sc-20066 AF594) or Alexa Fluor® 647 (sc-20066 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-20066 AF680) or Alexa Fluor® 790 (sc-20066 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD163 (GHI/61) is recommended for detection of CD163 of 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), immunohistochemistry (including paraffin-embedded sections) (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 CD163 siRNA (h): sc-42834, CD163 shRNA Plasmid (h): sc-42834-SH and CD163 shRNA (h) Lentiviral Particles: sc-42834-V.

Molecular Weight of CD163: 130 kDa.

Positive Controls: THP-1 cell lysate: sc-2238.

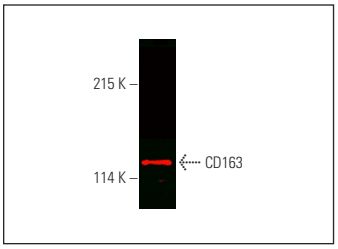
STORAGE

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

RESEARCH USE

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

DATA



CD163 (GHI/61) Alexa Fluor® 790: sc-20066 AF790. Near-infrared western blot analysis of CD163 expression in THP-1 whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

1. Ohki, E., et al. 2007. Expression of Histamine H4 Receptor in synovial cells from rheumatoid arthritic patients. Biol. Pharm. Bull. 30: 2217-2220.
2. Sindrilaru, A., et al. 2011. An unrestrained proinflammatory M1 macrophage population induced by iron impairs wound healing in humans and mice. J. Clin. Invest. 121: 985-997.
3. Escribese, M.M., et al. 2012. The prolyl hydroxylase PHD3 identifies proinflammatory macrophages and its expression is regulated by activin A. J. Immunol. 189: 1946-1954.
4. Jiao, K., et al. 2013. The identification of CD163 expressing phagocytic chondrocytes in joint cartilage and its novel scavenger role in cartilage degradation. PLoS ONE 8: e53312.
5. Cao, W., et al. 2015. Macrophage subtype predicts lymph node metastasis in oesophageal adenocarcinoma and promotes cancer cell invasion *in vitro*. Br. J. Cancer 113: 738-746.
6. Sousa-Neto, E.S., et al. 2016. Interaction of stromal and microvascular components in keratocystic odontogenic tumors. J. Oral Pathol. Med. 45: 557-564.
7. Reidy, P.T., et al. 2017. Aging-related effects of bed rest followed by eccentric exercise rehabilitation on skeletal muscle macrophages and Insulin sensitivity. Exp. Gerontol. 107: 37-49.
8. Guo, L., et al. 2018. $CD163^+$ macrophages promote angiogenesis and vascular permeability accompanied by inflammation in atherosclerosis. J. Clin. Invest. 128: 1106-1124.
9. Li, R., et al. 2019. Gut microbiota-stimulated cathepsin K secretion mediates TLR4-dependent M2 macrophage polarization and promotes tumor metastasis in colorectal cancer. Cell Death Differ. 26: 2447-2463.

PROTOCOLS

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