Antibodies

Anti-Human CD68 Antibody, Clone Y1/82A, Alexa Fluor® 488

Mouse monoclonal IgG2b antibody against human CD68, Alexa Fluor® 488-conjugated

Catalog	#60105AD	100 Tests	5 µL/test
	#60105AD.1	25 Tests	5 µL/test

STEMCELL™ TECHNOLOGIES
Scientists Helping Scientists™ | WWW.STEMCELL.COM
TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713
INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM
FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Product Description

The Y1/82A antibody reacts with human CD68, an ~110 kDa type 1 transmembrane glycoprotein and member of the sialomucin, LAMP and scavenger receptor families. The heavily glycosylated extracellular domain of CD68, which contains a praline-rich spacer region separating mucin and LAMP domains, binds low-density lipoprotein and certain lectins and selectins, though the function of CD68 remains unclear. CD68 is highly expressed in lysosomes, endosomes and cytoplasmic granules, and more weakly on the surface of macrophages, monocytes, neutrophils, basophils, dendritic cells and NK cells. It has also been detected in the cytoplasm of γ/δ T cells, LAK cells, fibroblasts, endothelial cells and subsets of B cells and hematopoietic progenitors, as well as in various non-hematopoietic tissues such as liver and kidney. CD68 is particularly useful as a marker for cells of the macrophage lineage and is employed, for example, for distinguishing the monocyte/macrophage and lymphoid forms of leukemia. The Y1/82A antibody recognizes an epitope distinct from those of antibody clones Y2/131, EBM11, Ki-M6 and KP1. Y1/82A is reportedly more specific for monocytes and macrophages than KP1.

Target Antigen Name:	CD68
Alternative Names:	GP110, LAMP4, Lysosomal-associated membrane protein, Macrosialin, SCARD1, Scavenger receptor class D member 1
Gene ID:	968
Species Reactivity:	Human
Host Species:	Mouse (BALB/c)
Clonality:	Monoclonal
Clone:	Y1/82A
Isotype:	IgG2b, kappa
Immunogen:	Phytohaemagglutinin-activated peripheral blood mononuclear cells
Conjugate:	Alexa Fluor® 488

Applications

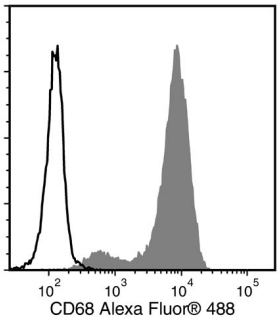
Verified:	FC
Reported:	FC
Special Applications:	This antibody clone has been verified for purity assessments of cells isolated with EasySep™ kits, including EasySep™ Human CD14 Positive Selection Kit (Catalog #18058), and for analyzing human macrophages derived from cultured monocytes.

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) bovine serum albumin
Purification:	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 488 under optimal conditions. The solution is free of unconjugated Alexa Fluor® 488.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com.
Directions for Use:	For flow cytometry the suggested use of this antibody is ≤ 5 µL per 1 x 10^6 cells in 100 µL volume or 5 µL per 100 µL of whole blood. It is recommended that the antibody be titrated for optimal performance for each application.

Data



Flow cytometry analysis of human peripheral blood mononuclear cells (PBMCs; gated on monocytes). Cells were fixed and permeabilized, then labeled with Anti-Human CD68 Antibody, Clone Y1/82A, Alexa Fluor® 488 (filled histogram) or Mouse IgG2b, kappa Isotype Control Antibody, Clone MPC-11, Alexa Fluor® 488 (Catalog #60072AD) (solid line histogram).

Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

1. D'Angelo F et al. (2013) Macrophages promote epithelial repair through hepatocyte growth factor secretion. Clin Exp Immunol 174(1): 60–72. (FC)
2. Rao G et al. (2013) Reciprocal interactions between tumor-associated macrophages and CD44-positive cancer cells via osteopontin/CD44 promote tumorigenicity in colorectal cancer. Clin Cancer Res 19(4): 785–97. (FC, IHC, IF)
3. Gottfried E et al. (2008) Expression of CD68 in non-myeloid cell types. Scand J Immunol 67(5): 453–63. (FC, IHC, WB)
4. Hameed A et al. (1994) Immunohistochemical expression of CD68 antigen in human peripheral blood T cells. Hum Pathol 25(9): 872–6. (FC, IHC)
5. Doussis IA et al. (1993) CD68 reactivity of non-macrophage derived tumours in cytological specimens. J Clin Pathol 46(4): 334–6. (IHC)
6. Elner SG et al. (1992) CD68 antigen expression by human retinal pigment epithelial cells. Exp Eye Res 55(1): 21–8. (ICC, IHC)
7. Pulford KA et al. (1990) Distribution of the CD68 macrophage/myeloid associated antigen. Int Immunol 2(10): 973–80. (ICC, IHC, WB)
8. Reid CD et al. (1990) Identification of hematopoietic progenitors of macrophages and dendritic Langerhans cells (DL-CFU) in human bone marrow and peripheral blood. Blood 76(6): 1139–49. (ICC)
9. Micklem K et al. (1989) A human macrophage-associated antigen (CD68) detected by six different monoclonal antibodies. Br J Haematol 73(1): 6–11. (FC, ICC, IP)
10. Davey FR et al. (1988) Monoclonal antibody (Y1/82A) with specificity towards peripheral blood monocytes and tissue macrophages. J Clin Pathol 41(7): 753–8. (FC, ICC, IHC, Immunoblotting, WB)