Datasheet: MCA1322GA

BATCH NUMBER 1804

Description:	RAT ANTI MOUSE CD204
Specificity:	CD204
Other names:	SCAVENGER RECEPTOR TYPE I/II
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	2F8
Isotype:	IgG2b
Quantity:	0.1 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			1/50 - 1/100
Immunohistology - Frozen (1)	▪			
Immunohistology - Paraffin		▪		
Immunohistology - Resin		▪		
ELISA	▪			
Immunoprecipitation	▪			
Western Blotting (2)	▪			
Immunofluorescence	▪			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

(1)**The epitope recognised by this antibody is reported to be sensitive to formaldehyde fixation and tissue processing. Bio-Rad recommends the use of acetone fixation for frozen sections.**

(2)**This product recognises CD204 in J774 cells under non-reduced conditions only.**

Target Species

Mouse

Species Cross Reactivity

Reacts with: Pig, Channel catfish

N.B. Antibody reactivity and working conditions may vary between species. Cross

	reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1 mg/ml
Immunogen	Raw 264 cell line
External Database Links	**UniProt:** P30204 Related reagents **Entrez Gene:** 20288 Msr1 Related reagents
Synonyms	Scvr
RRID	AB_323913
Fusion Partners	Spleen cells from immunised AO rats were fused with cells of the Y3 rat myeloma cell line
Specificity	**Rat anti Mouse CD204 antibody, clone 2F8** recognizes the murine scavenger receptor class A (SR-A), type I and II, also known as CD204. CD204 is expressed by tissue macrophages and functions both as an endocytic receptor for lipoproteins and as an adhesion receptor for macrophages binding to ligand rich tissues e.g. atherosclerotic lesions. Rat anti Mouse CD204 antibody, clone 2F8 inhibits the uptake of acetylated low-density lipoproteins and also inhibits divalent cation independent adhesion (Fraser *et al.* 1993). Rat anti Mouse CD204 antibody, clone 2F8 recognizes an epitope within SRA that is polymorphic in the SRA from C57BL/6 mice. Rat anti Mouse CD204 antibody, clone 2F8 is therefore unsuitable for use with the C57BL/6 mouse strain (Daugherty *et al.* 2000).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 cells in 100ul.
References	1. Fraser, I. *et al.* (1993) Divalent cation-independent macrophage adhesion inhibited by

monoclonal antibody to murine scavenger receptor. Nature. 364 (6435): 343-6.
2. de Villiers, W.J. *et al.* (1994) Macrophage-colony-stimulating factor selectively enhances macrophage scavenger receptor expression and function. J Exp Med. 180 (2): 705-9.
3. Hughes, D.A. *et al.* (1995) Murine macrophage scavenger receptor: in vivo expression and function as receptor for macrophage adhesion in lymphoid and non-lymphoid organs. Eur J Immunol. 25 (2): 466-73.
4. Gordon, S. (1995) The macrophage. Bioessays. 17 (11): 977-86.
5. Hughes, D.A. *et al.* (1994) Murine M phi scavenger receptor: adhesion function and expression. Immunol Lett. 43 (1-2): 7-14.
6. Aid, S. *et al.* (2008) Neuroinflammatory response to lipopolysaccharide is exacerbated in mice genetically deficient in cyclooxygenase-2. J Neuroinflammation. 5: 17.
7. Daugherty, A. *et al.* (2000) Polymorphism of class A scavenger receptors in C57BL/6 mice. J Lipid Res. 41 (10): 1568-77.
8. Moldenhauer, L.M. *et al.* (2010) GM-CSF is an essential regulator of T cell activation competence in uterine dendritic cells during early pregnancy in mice. J Immunol. 185 (11): 7085-96.
9. Luechtenborg, B. *et al.* (2008) Function of scavenger receptor class A type I/II is not important for smooth muscle foam cell formation. Eur J Cell Biol. 87: 91-9.
10. Sever-Chroneos, Z. *et al.* (2011) Surfactant Protein A (SP-A)-mediated Clearance of *Staphylococcus aureus* Involves Binding of SP-A to the Staphylococcal Adhesin Eap and the Macrophage Receptors SP-A Receptor 210 and Scavenger Receptor Class A. J Biol Chem. 286: 4854-70.
11. Yang, C.N. *et al.* (2011) Mechanism mediating oligomeric Aβ clearance by naïve primary microglia. Neurobiol Dis. 42 (3): 221-30.
12. Hald, A. *et al.* (2011) MMP9 is protective against lethal inflammatory mass lesions in the mouse colon. Dis Model Mech. 4: 212-27.
13. Swain, S.D. *et al.* (2011) *Pneumocystis* infection in an immunocompetent host can promote collateral sensitization to respiratory antigens. Infect Immun. 79 (5): 1905-14.
14. Nikolic, D. *et al.* (2011) SR-A ligand and M-CSF dynamically regulate SR-A expression and function in primary macrophages via p38 MAPK activation. BMC Immunol. 12: 37.
15. Zaynagetdinov, R *et al.* (2011) A critical role for macrophages in promotion of urethane-induced lung carcinogenesis. J Immunol. 187 (11): 5703-11.
16. Kaur, H. *et al.* (2003) Identification of a scavenger receptor homologue on nonspecific cytotoxic cells and evidence for binding to oligodeoxyguanosine. Fish Shellfish Immunol. 15: 169-81.
17. Kaur, H. *et al.* (2004) Single-base oligodeoxyguanosine-binding proteins on nonspecific cytotoxic cells: identification of a new class of pattern-recognition receptors. Scand J Immunol. 60: 238-48.
18. Koronyo Y *et al.* (2015) Therapeutic effects of glatiramer acetate and grafted CD115+ monocytes in a mouse model of Alzheimer's disease. Brain. 138 (Pt 8): 2399-422.
19. Nielsen, B.S. *et al.* (2008) Matrix metalloproteinase 13 is induced in fibroblasts in polyomavirus middle T antigen-driven mammary carcinoma without influencing tumor progression. PLoS One. 3 (8): e2959.
20. Tao, J. *et al.* (2015) ClC-3 deficiency prevents atherosclerotic lesion development in ApoE$^{-/-}$ mice. J Mol Cell Cardiol. 87: 237-247.
21. Prins, J.R. *et al.* (2015) Unstable Foxp3+ regulatory T cells and altered dendritic cells are associated with lipopolysaccharide-induced fetal loss in pregnant interleukin

10-deficient mice. Biol Reprod. 93 (4): 95.
22. Almholt, K. *et al.* (2015) Spontaneous lung and lymph node metastasis in transgenic breast cancer is independent of the urokinase receptor uPAR. Clin Exp Metastasis. 32 (6): 543-54.
23. Verheijden S *et al.* (2015) Identification of a chronic non-neurodegenerative microglia activation state in a mouse model of peroxisomal β-oxidation deficiency. Glia. 63 (9): 1606-20.
24. Kokubu, Y. *et al.* (2016) Induction of protumoral CD11c(high) macrophages by glioma cancer stem cells through GM-CSF. Genes Cells. 21 (3): 241-51.
25. Sapkota, M. *et al.* (2016) Malondialdehyde-Acetaldehyde-Adducted Surfactant Protein Alters Macrophage Functions Through Scavenger Receptor A. Alcohol Clin Exp Res. 40 (12): 2563-2572.
26. Fujiwara, Y. *et al.* (2016) Onionin A, a sulfur-containing compound isolated from onions, impairs tumor development and lung metastasis by inhibiting the protumoral and immunosuppressive functions of myeloid cells. Mol Nutr Food Res. Jul 9. [Epub ahead of print]
27. Tsay, H.J. *et al.* (2016) Identifying N-linked glycan moiety and motifs in the cysteine-rich domain critical for N-glycosylation and intracellular trafficking of SR-AI and MARCO. J Biomed Sci. 23: 27.
28. Horlad, H. *et al.* (2013) Corosolic acid impairs tumor development and lung metastasis by inhibiting the immunosuppressive activity of myeloid-derived suppressor cells. Mol Nutr Food Res. 57 (6): 1046-54.
29. Shiau, D.J. *et al.* (2020) Hepatocellular carcinoma-derived high mobility group box 1 triggers M2 macrophage polarization via a TLR2/NOX2/autophagy axis. Sci Rep. 10 (1): 13582.
30. Tian, L.X. *et al.* (2020) Cytochrome P450 1A1 enhances inflammatory responses and impedes phagocytosis of bacteria in macrophages during sepsis. Cell Commun Signal. 18 (1): 70.
31. Wang, Y. *et al.* (2021) Scavenger receptor A1 participates in uptake of ***Leptospira interrogans*** serovar Autumnalis strain 56606v and inflammation in mouse macrophages. Emerg Microbes Infect. : 1-39.

Storage	Store at +4°C or at -20°C if preferred. This product should be stored undiluted. Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA1322GA 10040
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Rat IgG (STAR16...)	DyLight®800
Rabbit Anti Rat IgG (STAR17...)	FITC
Goat Anti Rat IgG (STAR73...)	RPE
Rabbit Anti Rat IgG (STAR21...)	HRP
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	DyLight®550, DyLight®650, DyLight®800
Goat Anti Rat IgG (STAR131...)	Alk. Phos., Biotin
Goat Anti Rat IgG (STAR72...)	HRP
Goat Anti Rat IgG (STAR69...)	FITC

North & South America Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com

Worldwide Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com

Europe Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

'M365148:200529'

Printed on 23 May 2025