

Datasheet: MCA2518GA

Description:	MOUSE ANTI HUMAN CD172a
Specificity:	CD172a
Other names:	SIRP ALPHA
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	15-414
Isotype:	IgG2a
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	▪			1/100 - 1/200
Immunohistology - Frozen	▪			1/100
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting			▪	
Immunofluorescence	▪			

Where this product 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 product for use in their own system using appropriate negative/positive controls.

Target Species	Human
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 (NaN ₃)
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0mg/ml
Immunogen	Monocyte-derived dendritic cells.

**External Database
Links**

UniProt:

[P78324](#) [Related reagents](#)

Entrez Gene:

[140885](#) SIRPA [Related reagents](#)

Synonyms

BIT, MFR, MYD1, PTPNS1, SHPS1, SIRP

Fusion Partners

Spleen cells from immunised Balb/c mice were fused with cells of the X63-Ag8.653 myeloma cell line.

Specificity

Mouse anti Human CD172a antibody, clone 15-414 recognizes human CD172a, also known as signal-regulatory protein alpha, a receptor-type transmembrane glycoprotein expressed on cells of myeloid origin, including granulocytes, dendritic cells (DCs), macrophages, mast cells and haematopoietic stem cells.

CD172a acts as a substrate for several activated tyrosine kinases, including EGFR, PDGFR, src and insulin receptor and is involved in the negative regulation of receptor tyrosine kinase-coupled signaling pathways. Ligand binding of CD172a to integrin-associated protein CD47, results in tyrosine kinase phosphorylation of immunoreceptor tyrosine-based inhibitory motifs (ITIMs) within the cytoplasmic region of CD172a, mediating the recruitment and activation of the tyrosine phosphatases SHP-1 and SHP-2. These then act as regulators of cellular function, through dephosphorylation of specific substrates. Ligation of CD172a with CD47 has been demonstrated in several regulatory processes, including the inhibition of host cell phagocytosis by macrophages and the bi-directional activation of T cells and DCs.

Flow Cytometry

Use 10ul of the suggested working dilution to label 1×10^6 cells in 100ul.

**Histology Positive
Control Tissue**

Human tonsil.

References

1. Fujioka, Y. *et al.* (1996) A novel membrane glycoprotein, SHPS-1, that binds the SH2-domain-containing protein tyrosine phosphatase SHP-2 in response to mitogens and cell adhesion. [Mol Cell Biol. 16 \(12\): 6887-99.](#)
2. Baba, T. *et al.* (2012) Novel Process of Intrathymic Tumor-Immune Tolerance through CCR2-Mediated Recruitment of Sirp α (+) Dendritic Cells: A Murine Model. [PLoS One. 7: e41154.](#)
3. Szaraz, P.*et al.* (2016) *In Vitro* Differentiation of First Trimester Human Umbilical Cord Perivascular Cells into Contracting Cardiomyocyte-Like Cells [Stem Cells International. 2016: 1-13.](#)
4. Hussen, J. *et al.* (2014) The chemokine CCL5 induces selective migration of bovine classical monocytes and drives their differentiation into LPS-hyporesponsive macrophages *in vitro*. [Dev Comp Immunol. 47 \(2\): 169-77.](#)

Further Reading

1. van Beek, E.M. *et al.* (2005) Signal regulatory proteins in the immune system. [J Immunol. 175 \(12\): 7781-7.](#)

Storage

Store at +4°C or at -20°C if preferred.
Storage in frost-free freezers is not recommended.
This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life

18 months from date of despatch.

Health And Safety Information Material Safety Datasheet documentation #10040 available at:
10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR76...) [RPE](#)
Goat Anti Mouse IgG IgA IgM (STAR87...) [Alk. Phos.](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR9...) [FITC](#)
Goat Anti Mouse IgG (STAR77...) [HRP](#)
Rabbit Anti Mouse IgG (STAR12...) [RPE](#)
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR8...) [DyLight@800](#)
Goat Anti Mouse IgG (STAR70...) [FITC](#)
Human Anti Mouse IgG2a (HCA037...) [FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight@488](#), [DyLight@549](#),
[DyLight@649](#), [DyLight@680](#), [DyLight@800](#),
[FITC](#), [HRP](#)

Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL \(MCA929\)](#)

Recommended Useful Reagents

[HISTAR DETECTION SYSTEM \(STAR3000A\)](#)

[HISTAR DETECTION SYSTEM \(STAR3000B\)](#)

[HISTAR DETECTION SYSTEM \(STAR3000C\)](#)

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

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