Datasheet: MCA2257P647

Description:	MOUSE ANTI HUMAN CD226:RPE-Alexa Fluor® 647
Specificity:	CD226
Other names:	DNAM-1
Format:	RPE-ALEXA FLUOR® 647
Product Type:	Monoclonal Antibody
Clone:	DX11
Isotype:	IgG1
Quantity:	100 TESTS

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	▪			Neat

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 conjugated to RPE-Alexa Fluorr® 647 - lyophilized

Reconstitution

Reconstitute with 1.0 ml distilled water
Care should be taken during reconstitution as the protein may appear as a film at the bottom of the vial. Bio-Rad recommend that the vial is gently mixed after reconstitution.

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
RPE-Alexa Fluor®647 488nm laser	496	667
RPE-Alexa Fluor®647 561nm laser	546	667

Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% sodium azide (NaN_3) 1% bovine serum albumin 5% sucrose
Immunogen	Human cytotoxic T lymphocyte clone
External Database Links	**UniProt:** Q15762 Related reagents **Entrez Gene:** 10666 CD226 Related reagents
Synonyms	DNAM1
Fusion Partners	Spleen cells from immunized BALB/c mouse were fused with cells of the Sp2/0 myeloma cell line
Specificity	**Mouse anti Human CD226 antibody, clone DX11** recognizes human CD226, a ~65 kDa glycoprotein, also known as DNAM1 (DNAX accessory molecule-1). CD226 is broadly expressed on T-cells, NK cells, platelets, monocytes and a subset of B cells. CD226 is also expressed by a subset of CD3 positive thymocytes. Mouse anti Human CD226 antibody, clone DX11 is reported to inhibit T- and NK cell mediated cytotoxicity against tumor cell targets and to block TNF alpha and IFN gamma secretion by alloantigen-specific T-cells (Kojima *et al.* 2003).
Flow Cytometry	Use 10µl of the suggested working dilution to label 1 x 10^6 cells in 100µl
References	1. Shibuya, A. *et al.* (1996) DNAM-1, a novel adhesion molecule involved in the cytolytic function of T lymphocytes. Immunity. 4 (6): 573-81. 2. Shibuya, A. *et al.* (1998) Protein kinase C is involved in the regulation of both signaling and adhesion mediated by DNAX accessory molecule-1 receptor. J Immunol. 161 (4): 1671-6. 3. Kojima, H. *et al.* (2003) CD226 mediates platelet and megakaryocytic cell adhesion to vascular endothelial cells. J Biol Chem. 278 (38): 36748-53. 4. Manes, T.D. and Pober, J.S. (2011) Identification of Endothelial Cell Junctional Proteins and Lymphocyte Receptors Involved in Transendothelial Migration of Human Effector Memory CD4+ T Cells. J Immunol. 186: 1763-8. 5. Ardolino, M. *et al.* (2011) DNAM-1 ligand expression on Ag-stimulated T lymphocytes is mediated by ROS-dependent activation of DNA-damage response: relevance for NK-T cell interaction. Blood. 117: 4778-86. 6. Soriani, A. *et al.* (2009) ATM-ATR-dependent up-regulation of DNAM-1 and NKG2D ligands on multiple myeloma cells by therapeutic agents results in enhanced NK-cell susceptibility and is associated with a senescent phenotype. Blood. 113: 3503-11. 7. Fionda, C. *et al.* (2009) Heat shock protein-90 inhibitors increase MHC class I-related

chain A and B ligand expression on multiple myeloma cells and their ability to trigger NK cell degranulation. J Immunol. 183 (7): 4385-94.
8. Matusali, G. *et al.* (2012) The Human Immunodeficiency Virus Type 1 Nef and Vpu Proteins Downregulate the Natural Killer Cell-Activating Ligand PVR. J Virol. 86: 4496-504.
9. Fionda, C. *et al.* (2015) Nitric oxide donors increase PVR/CD155 DNAM-1 ligand expression in multiple myeloma cells: role of DNA damage response activation. BMC Cancer. 15 (1): 17.
10. Molfetta, R. *et al.* (2019) The Ubiquitin-proteasome pathway regulates Nectin2/CD112 expression and impairs NK cell recognition and killing. Eur J Immunol. 49 (6): 873-83.
11. Vulpis, E. *et al.* (2022) Impact on NK cell functions of acute versus chronic exposure to extracellular vesicle-associated MICA: Dual role in cancer immunosurveillance. J Extracell Vesicles. 11 (1): e12176.
12. Molfetta, R. *et al.* (2020) CD155: A Multi-Functional Molecule in Tumor Progression. Int J Mol Sci. 21 (3): 922.
13. Zitti, B. *et al.* (2017) Innate immune activating ligand SUMOylation affects tumor cell recognition by NK cells. Sci Rep. 7 (1): 10445.
14. Mekhloufi, A. *et al.* (2020) Bone Marrow Stromal Cell-Derived IL-8 Upregulates PVR Expression on Multiple Myeloma Cells via NF-kB Transcription Factor. Cancers (Basel). 12 (2): 440.

Storage	Prior to reconstitution store at +4°C. After reconstitution store at +4°C. DO NOT FREEZE. This product should be stored undiluted. This product is photosensitive and should be protected from light.
Guarantee	12 months from date of despatch
Acknowledgements	This product is provided under an intellectual property license from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchased product solely in research conducted by the buyer, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, CA 92008 USA or outlicensing@thermofisher.com
Health And Safety Information	Material Safety Datasheet documentation #20487 available at: https://www.bio-rad-antibodies.com/SDS/MCA2257P647 20487
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:RPE-Alexa Fluor® 647 (MCA928P647)

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A)
HUMAN SEROBLOCK (BUF070B)

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

'M419955:230705'

Printed on 19 Oct 2023