Datasheet: MCA1949F

BATCH NUMBER 148461

Description:	MOUSE ANTI HUMAN CD29:FITC
Specificity:	CD29
Other names:	INTEGRIN BETA 1 CHAIN
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	4B7R
Isotype:	IgG1
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	▪			Neat - 1/10

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

Target Species

Human

Product Form

Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
FITC	490	525

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
1% Bovine Serum Albumin

Approx. Protein Concentrations

IgG concentration 0.1mg/ml

Immunogen	Occular melanoma cell line V+B2.
External Database Links	**UniProt:** P05556 Related reagents **Entrez Gene:** 3688 ITGB1 Related reagents
Synonyms	FNRB, MDF2, MSK12
RRID	AB_323227
Specificity	**Mouse anti Human CD29 monoclonal antibody, clone 4B7R** recognizes the human integrin beta 1 subunit, also known as CD29, a ~130 kDa (red) 115 kDa (non-red) single pass type I transmembrane glycoprotein expressed by most leucocytes and mesenchymal stem cells. Integrin receptors are involved in the regulation of a variety of important biological functions, including embryonic development, wound repair, hemostasis and prevention of programmed cell death. They are also implicated in abnormal pathological states such as tumor directed angiogenesis, tumor cell growth, and metastasis. Surface expression of CD29 on human natural killer cells can be reduced by pretreatment with the glutathione-S-transferase inhibitor diethyl maleate (Horvath-Arcidiacono *et al.* 2003)
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 cells in 100ul.
References	1. Marshall, J.F. *et al.* (1998) Comparative analysis of integrins *in vitro* and *in vivo* in uveal and cutaneous melanomas. Br J Cancer. 77 (4): 522-9. 2. Pillay, J. *et al.* (2010) Functional heterogeneity and differential priming of circulating neutrophils in human experimental endotoxemia. J Leukoc Biol. 88: 211-20. 3. Kim, B.S. *et al.* (2011) Effects of the dichloromethane fraction of dipsaci radix on the osteoblastic differentiation of human alveolar bone marrow-derived mesenchymal stem cells. Biosci Biotechnol Biochem. 75:13-9. 4. Kato, H. *et al.* (2012) The primacy of β1 integrin activation in the metastatic cascade. PLoS One. 7 (10): e46576. 5. Meng, J. *et al.* (2011) Contribution of human muscle-derived cells to skeletal muscle regeneration in dystrophic host mice. PLoS One. 6(3):e17454. 6. Horvath-Arcidiacono, J.A. *et al.* (2003) Human natural killer cell activity against porcine targets: modulation by control of the oxidation-reduction environment and role of adhesion molecule interactions. Cell Immunol. 222: 35-44. 7. Tan, D.W. *et al.* (2013) Single-cell gene expression profiling reveals functional heterogeneity of undifferentiated human epidermal cells. Development. 140 (7): 1433-44. 8. Yang, J. *et al.* (2015) Cordycepin protected against the TNF-α-induced inhibition of osteogenic differentiation of human adipose-derived mesenchymal stem cells. Int J Immunopathol Pharmacol. 28 (3): 296-307. 9. Gu, Q. *et al.* (2015) *Ginkgo biloba* extract promotes osteogenic differentiation of human bone marrow mesenchymal stem cells in a pathway involving Wnt/β-catenin signaling.

Pharmacol Res. 97: 70-8.
10. Chen, Y. *et al.* (2015) Effect of human umbilical cord mesenchymal stem cells transplantation on nerve fibers of a rat model of endometriosis. Int J Fertil Steril. 9 (1): 71-80.
11. Lee, H.J. *et al.* (2017) ICOSL expression in human bone marrow-derived mesenchymal stem cells promotes induction of regulatory T cells. Sci Rep. 7: 44486.
12. Yi, T. *et al.* (2015) Manufacture of Clinical-Grade Human Clonal Mesenchymal Stem Cell Products from Single Colony Forming Unit-Derived Colonies Based on the Subfractionation Culturing Method. Tissue Eng Part C Methods. 21 (12): 1251-62.
13. Sun, Y. *et al.* (2017) Antinociceptive Effect of Intrathecal Injection of Genetically Engineered Human Bone Marrow Stem Cells Expressing the Human Proenkephalin Gene in a Rat Model of Bone Cancer Pain. Pain Res Manag. 2017: 7346103.

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. This product is photosensitive and should be protected from light. 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 #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA1949F 10041
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:FITC (MCA928F)

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
'M365958:200529'

Printed on 18 Jan 2024