

Datasheet: MCA1949A647

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| Description: | MOUSE ANTI HUMAN CD29:Alexa Fluor® 647 |
| Specificity: | CD29 |
| Other names: | INTEGRIN BETA 1 CHAIN |
| Format: | ALEXA FLUOR® 647 |
| Product Type: | Monoclonal Antibody |
| Clone: | 4B7R |
| Isotype: | IgG1 |
| Quantity: | 100 TESTS/1ml |

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 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 Alexa Fluor®647 - liquid | | |
| Max Ex/Em | Fluorophore | Excitation Max (nm) | Emission Max (nm) |
| | Alexa Fluor®647 | 650 | 665 |
| Preparation | Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant | | |
| Buffer Solution | Phosphate buffered saline | | |
| Preservative | 0.09% Sodium Azide | | |
| Stabilisers | 1% Bovine Serum Albumin | | |
| Approx. Protein Concentrations | IgG concentration 0.05 mg/ml | | |
| Immunogen | Ocular melanoma cell line V+B2. | | |

**External Database
Links**

UniProt:

[P05556](#) [Related reagents](#)

Entrez Gene:

[3688](#) ITGB1 [Related reagents](#)

Synonyms FNRB, MDF2, MSK12

RRID AB_322449

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 10⁶ cells in 100ul.

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- References**
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 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 β 1 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

Acknowledgements

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Health And Safety Information

Material Safety Datasheet documentation #10041 available at:
10041: <https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf>

Regulatory

For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:Alexa Fluor® 647 \(MCA928A647\)](#)

Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

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