

Datasheet: MCA2028PE

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| Description: | MOUSE ANTI HUMAN CD29:RPE |
| Specificity: | CD29 |
| Other names: | INTEGRIN BETA 1 CHAIN |
| Format: | RPE |
| Product Type: | Monoclonal Antibody |
| Clone: | 12G10 |
| 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.

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| Target Species | Human |
| Species Cross Reactivity | Reacts with: Mink Does not react with: Rat, Mouse N.B. Antibody reactivity and working conditions may vary between species. |
| Product Form | Purified IgG conjugated to R. Phycoerythrin (RPE) - 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. |
| 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 | Purified human beta1 integrin preparation from HT1080 fibrosarcoma cell extract |

**External Database
Links**

UniProt:

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

Entrez Gene:

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

Synonyms

FNRB, MDF2, MSK12

Fusion Partners

Spleen cells from an immunised BALB/c mice were fused with cells of the X63/Ag8.653 mouse myeloma cell line

Specificity

Mouse anti Human CD29 monoclonal antibody, clone 12G10 recognizes human CD29 also known as beta1 integrin or VLA-4 subunit alpha. CD29 is a ~130 kDa under reducing, ~115 kDa under non-reducing conditions single pass type I transmembrane glycoprotein. CD29 acts as the common beta subunit of the heterodimeric very late antigens 1-6, complexing with CD49a-f respectively where it forms part of the receptors for laminin , collagen and fibronectin. the VLA heterodimers mediate cell-cell and cell-matrix interactions.

Mouse anti Human CD29, clone 12G10 binding to cells adhering via VLA-4 results in actin cytoskeletal disruption and subsequent inhibition of attachment and spreading whilst 12G10 binding to cells adhering via VLA-5 results in enhancement of both these processes ([Humphries *et al.* 2005](#)). Clone 12G10 enhances alpha 5 beta 1-fibronectin interactions and binds to a region of CD25 containing the binding epitopes of several other anti CD29 antibody clones. However, unlike these, binding of 12G10 is enhanced in the presence of ligands such as fibronectin fragments ([Mould *et al.* 1995](#)). Binding of antibody clone 12G10 to the integrin β 1 subunit is affected by divalent cations and the binding epitope appears to be located around residues 207-218 in the b1 subunit putative A-domain ([Mould *et al.* 1998](#)).

References

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| 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 reconstitution |
| Health And Safety Information | Material Safety Datasheet documentation #10075 available at: 10075: https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf |
| Regulatory | For research purposes only |

Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:RPE \(MCA928PE\)](#)

Recommended Useful Reagents

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

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

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| 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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'M344271:190111'

Printed on 20 May 2019