

Datasheet: MCA6406GA

BATCH NUMBER 172530

Description:	MOUSE ANTI PIG CD28
Specificity:	CD28
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	3D11
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	▪			1/25 - 1/50

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	Pig
Product Form	Purified IgG - liquid
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
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	A20J cells expressing pig CD28

**External Database
Links**

UniProt:

[A0A5G2R2W4](#)

[Related reagents](#)

Specificity

Mouse anti Pig CD28 antibody, clone 3D11 recognizes pig CD28.

CD28 is a co-stimulatory cell surface molecule expressed by T cell subsets. CD28 is the receptor for CD80 (B7.1) and CD86 (B7.2). Analogous to humans, CD28 is expressed on naive CD4+ and CD8+ T cells and nearly all CD4+ T cells with a central memory phenotype (CD8a+ CD27+ in pigs) with the latter expressing higher levels of CD28 than naive T cells. Approximately 50% of CD4+ effector memory T cells bear CD28; at levels similar to central memory CD4+ T cells.

Mouse anti Pig CD28 antibody, clone 3D11, has been shown to be able to detect CD28 on CD8+ and CD4+ $\alpha\beta$ T-cells ([Uehlein et al. 2021](#)). Among $\gamma\delta$ T cells, a small CD2+ subpopulation of phenotypically naive cells express CD28. *In vitro*, clone 3D11 can co-stimulate porcine T cells, inducing increased proliferation and cytokine secretion.

Flow Cytometry

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

References

1. Hoog, A. *et al.* (2022) Identification of CD4(+) T cells with T follicular helper cell characteristics in the pig. [Dev Comp Immunol. 134: 104462.](#)
2. Vatzia, E. *et al.* (2019) Deoxynivalenol Affects Proliferation and Expression of Activation-Related Molecules in Major Porcine T-Cell Subsets. [Toxins \(Basel\). 11 \(11\): 644.](#)
3. Li, Y. *et al.* (2022) Systemic CD4 cytotoxic T cells improve protection against PRRSV-1 transplacental infection. [Front Immunol. 13: 1020227.](#)

Storage

This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

Guarantee

12 months from date of despatch

**Health And Safety
Information**

Material Safety Datasheet documentation #10040 available at:
<https://www.bio-rad-antibodies.com/SDS/MCA6406GA>

Regulatory

For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...) [RPE](#)

Goat Anti Mouse IgG IgA IgM (STAR87...) [HRP](#)

Goat Anti Mouse IgG (STAR76...) [RPE](#)

Goat Anti Mouse IgG (STAR70...)	FITC
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos. , DyLight®488 , DyLight®550 , DyLight®650 , DyLight®680 , DyLight®800 , FITC , HRP
Rabbit Anti Mouse IgG (STAR13...)	HRP
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC , HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC
Goat Anti Mouse IgG (STAR77...)	HRP

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

Product inquiries: www.bio-rad-antibodies.com/technical-support

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M426747:240228'

Printed on 29 Jan 2026

© 2026 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)