

# Datasheet: MCA1971SBUV510

**BATCH NUMBER 64612355**

|                      |                                                |
|----------------------|------------------------------------------------|
| <b>Description:</b>  | MOUSE ANTI PIG CD16:StarBright UltraViolet 510 |
| <b>Specificity:</b>  | CD16                                           |
| <b>Other names:</b>  | FcRIII                                         |
| <b>Format:</b>       | StarBright UltraViolet 510                     |
| <b>Product Type:</b> | Monoclonal Antibody                            |
| <b>Clone:</b>        | G7                                             |
| <b>Isotype:</b>      | IgG1                                           |
| <b>Quantity:</b>     | 100 TESTS/0.5ml                                |

## 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](http://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.

|                        |                                                                                               |                            |                          |
|------------------------|-----------------------------------------------------------------------------------------------|----------------------------|--------------------------|
| <b>Target Species</b>  | Pig                                                                                           |                            |                          |
| <b>Product Form</b>    | Purified IgG conjugated to StarBright UltraViolet 510 - liquid                                |                            |                          |
| <b>Max Ex/Em</b>       | <b>Fluorophore</b>                                                                            | <b>Excitation Max (nm)</b> | <b>Emission Max (nm)</b> |
|                        | StarBright UltraViolet 510                                                                    | 340                        | 513                      |
| <b>Preparation</b>     | Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant |                            |                          |
| <b>Buffer Solution</b> | Phosphate buffered saline                                                                     |                            |                          |
| <b>Preservative</b>    | 0.09% Sodium Azide (NaN <sub>3</sub> )                                                        |                            |                          |
| <b>Stabilisers</b>     | 1% Bovine Serum Albumin                                                                       |                            |                          |
|                        | 0.1% Pluronic F68                                                                             |                            |                          |

0.1% PEG 3350  
0.05% Tween 20

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Immunogen               | Porcine peripheral blood leucocytes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| External Database Links | <b>UniProt:</b><br><a href="#">Q28942</a> <a href="#">Related reagents</a><br><br><b>Entrez Gene:</b><br><a href="#">397684</a> FCGR3B <a href="#">Related reagents</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Fusion Partners         | Spleen cells from immunized Balb/c mice were fused with cells of the mouse P3-X63-Ag8.653 myeloma cell line                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Specificity             | <p><b>Mouse anti Pig CD16, clone G7</b> recognizes porcine CD16 also known as Fc-gamma RIII or the low affinity IgG (Fc) receptor III. Clone G7 was clustered as CD16 at the Second International Workshop to Define Swine Cluster of Differentiation (CD) Antigens (<a href="#">Saalmuller et al. 1998</a>).</p> <p>Mouse anti pig CD16 immunoprecipitates a protein of ~40 kDa from porcine neutrophils and NK cells (<a href="#">Wierda et al. 1993</a>). Subsequent cloning and characterization of the G7 molecule indicated that G7 was the porcine homologue of Human CD16 (<a href="#">Halloran et al. 1994</a>).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Flow Cytometry          | Use 5µl of the suggested working dilution to label 10 <sup>6</sup> cells in 100µl. Best practices suggest a 5 minutes centrifugation at 6,000g prior to sample application.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| References              | <ol style="list-style-type: none"><li>1. Wierda, W.G. <i>et al.</i> (1993) Two distinct porcine natural killer lytic trigger molecules as PNK-E/G7 molecular complex. <a href="#">Cell Immunol. 146 (2): 270-83.</a></li><li>2. Halloran, P.J. <i>et al.</i> (1994) Biochemical characterization of the porcine Fc gamma RIII alpha homologue G7. <a href="#">Cell Immunol. 158 (2): 400-13.</a></li><li>3. Sánchez, C. <i>et al.</i> (1999) The porcine 2A10 antigen is homologous to human CD163 and related to macrophage differentiation. <a href="#">J Immunol. 162 (9): 5230-7.</a></li><li>4. Terzic, S. <i>et al.</i> (2002) Immunophenotyping of leukocyte subsets in peripheral blood and palatine tonsils of prefattening pigs. <a href="#">Vet Res Commun. 26: 273 - 83.</a></li><li>5. Vincent, I.E. <i>et al.</i> (2003) Dendritic cells harbor infectious porcine circovirus type 2 in the absence of apparent cell modulation or replication of the virus. <a href="#">J Virol. 77: 13288 - 300.</a></li><li>6. Summerfield, A. <i>et al.</i> (2003) Porcine peripheral blood dendritic cells and natural interferon-producing cells. <a href="#">Immunology 110: 440-9.</a></li><li>7. Inman, C.F. <i>et al.</i> (2010) Rearing environment affects development of the immune system in neonates. <a href="#">Clin Exp Immunol. 160 (3): 431-9.</a></li><li>8. Inman, C.F. <i>et al.</i> (2010) Dendritic cells interact with CD4 T cells in intestinal mucosa. <a href="#">J Leukoc Biol. 88 (3): 571-8.</a></li><li>9. Devriendt, B. <i>et al.</i> (2010) Targeting of <i>Escherichia coli</i> F4 fimbriae to Fcgamma receptors enhances the maturation of porcine dendritic cells. <a href="#">Vet Immunol Immunopathol. 135 (3-4): 188-98.</a></li></ol> |

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|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Further Reading</b>               | <p>1. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. <a href="#">Vet Res. 39: 54.</a></p> <p>2. Gerner W <i>et al.</i> (2015) Phenotypic and functional differentiation of porcine αβ T cells: current knowledge and available tools. <a href="#">Mol Immunol. 66 (1): 3-13.</a></p> |
| <b>Storage</b>                       | <p>Store at +4°C. DO NOT FREEZE.</p> <p>This product should be stored undiluted.</p>                                                                                                                                                                                                                                       |
| <b>Guarantee</b>                     | 12 months from date of despatch                                                                                                                                                                                                                                                                                            |
| <b>Acknowledgements</b>              | This product is covered by U.S. Patent No. 10,150,841 and related U.S. and foreign counterparts                                                                                                                                                                                                                            |
| <b>Health And Safety Information</b> | <p>Material Safety Datasheet documentation #20471 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA1971SBUV510">https://www.bio-rad-antibodies.com/SDS/MCA1971SBUV510</a></p>                                                                                                                              |
| <b>Regulatory</b>                    | For research purposes only                                                                                                                                                                                                                                                                                                 |

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**Product inquiries:** [www.bio-rad-antibodies.com/technical-support](http://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](http://bio-rad-antibodies.com/datasheets)  
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