# Datasheet: MCA1266SBV440

**BATCH NUMBER 64599644**

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| **Description:** | MOUSE ANTI MOUSE CD161 / NK1.1:StarBright Violet 440 |
| **Specificity:** | CD161 / NK1.1 |
| **Format:** | StarBright Violet 440 |
| **Product Type:** | Monoclonal Antibody |
| **Clone:** | PK136 |
| **Isotype:** | IgG2a |
| **Quantity:** | 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.

| | 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.

**Target Species**

Mouse

**Species Cross Reactivity**

Does not react with:Rat, Human

**Product Form**

Purified IgG conjugated to StarBright Violet 440 - liquid

**Max Ex/Em**

| Fluorophore | Excitation Max (nm) | Emission Max (nm) |
|---|---|---|
| StarBright Violet 440 | 383 | 436 |

**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
0.1% Pluronic F68

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| | 0.1% PEG 3350 |
| **Immunogen** | Spleen and bone marrow cells from CE mice. |
| **External Database Links** | **UniProt:**<br>P27814 Related reagents<br>P27812 Related reagents<br><br>**Entrez Gene:**<br>17059 Klrb1c Related reagents<br>80782 Klrb1b Related reagents |
| **Synonyms** | Ly55b, Ly55c, Nkrp1b, Nkrp1c |
| **Fusion Partners** | Spleen cells from immunized (C3H x BALB/c) FI Hybrid were fused with cells of the Sp2/0 - Ag14 myeloma cell line. |
| **Specificity** | **Mouse anti Mouse CD161 / NK1.1 antibody, clone PK136** recognizes the mouse NK1.1 cell surface antigen, a cell surface glycoprotein encoded by members of the NKR-P1 gene family. The NK1.1 surface antigen is also known as CD161b/CD161c and Ly-55.<br><br>In the mouse the NKR-P1 family has three members, NKR-P1A, -B and -C, whilst in the human only one member has been identified. The human protein has received the designation CD161, and the mouse proteins have been referred to as CD161a, -b, -c etc.<br><br>Although previously thought to recognize only CD161c, recent data has shown that the PK136 antibody may also react with CD161b. CD161c expression itself is strain specific in mice, but recognition of CD161b by PK136 appears to be even more complex, as only some CD161b positive strains are labelled by the antibody. Engagement of CD161c has been reported to have activating function in NK cells, whilst engagement of CD161b is inhibitory.<br><br>Mouse anti Mouse NK1.1 Antigen antibody, clone PK136 is useful for the identification of NK cells in selected strains of mice (positive on C57BL, FVB/N and NZB, but negative on AKR and BALB/c) and is also expressed by rare subsets of T cells and monocytes. Mouse anti Mouse NK1.1 antibody, clone PK136 has also been used for *in vivo* depletion of NK cells (Wang *et al*. 2022) and *in vitro* activation of NK cells (Kung and Miller 1995). |
| **Flow Cytometry** | Use 5µl of the suggested working dilution to label $10^6$ cells in 100µl. Best practices suggest a 5 minutes centrifugation at 6,000g prior to sample application. |
| **References** | 1. Koo, G.C. *et al.* (1986) The NK-1.1(-) mouse: a model to study differentiation of murine NK cells. J Immunol. 137 (12): 3742-7.<br>2. Kung, S.K. & Miller RG (1995) The NK1.1 antigen in NK-mediated F1 antiparent killing *in vitro*. J Immunol. 154 (4): 1624-33.<br>3. Wang, M. *et al.* (1998) Natural killer cell depletion fails to influence initial CD4 T cell commitment in vivo in exogenous antigen-stimulated cytokine and antibody responses. J |

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16. Flavell, D.J. *et al.* (2019) The TLR3 Agonist Poly Inosinic:Cytidylic Acid Significantly Augments the Therapeutic Activity of an Anti-CD7 Immunotoxin for Human T-cell Leukaemia. Biomedicines. 7 (1) Feb 16 [Epub ahead of print].
17. Miao, M. *et al.* (2021) Reevaluation of NOD/SCID Mice as NK Cell-Deficient Models. Biomed Res Int. 2021: 8851986.
18. Li, L. & Li, M. (2023) Astrocyte-derived extracellular vesicles inhibit the abnormal activation of immune function in neonatal mice with hypoxic-ischemic brain damage by carrying miR-124-3p. Neurol Res. 45 (12): 1079-90.

**Further Reading**

1. Arase, N. *et al.* (1997) Association with FcRgamma is essential for activation signal through NKR-P1 (CD161) in natural killer (NK) cells and NK1.1+ T cells. J Exp Med. 186 (12): 1957-63.

**Storage**

Store at +4°C. DO NOT FREEZE.
This product should be stored undiluted.

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| **Guarantee** | 12 months from date of despatch |
| **Acknowledgements** | This product is covered by U.S. Patent No. 10,150,841 and related U.S. and foreign counterparts |
| **Health And Safety Information** | Material Safety Datasheet documentation #20438 available at: https://www.bio-rad-antibodies.com/SDS/MCA1266SBV440 20438 |
| **Regulatory** | For research purposes only |

## Related Products

### Recommended Useful Reagents

MOUSE SEROBLOCK FcR (BUF041A)
MOUSE SEROBLOCK FcR (BUF041B)


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**Printed on 08 Mar 2024**