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SM067RT Monoclonal Antibody to CD161 / KLRB1 - PE

Alternate names: C-type lectin domain family 5 member B, CLEC5B, HNKR-P1a, Killer cell lectin-like receptor subfamily B member 1, NKRP1A, Natural killer cell surface protein P1A

Quantity: 25 Tests

Background: NK1.1 cell surface antigen is a cell surface glycoprotein encoded by members of the NKR-P1 gene family. 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.
Although previously thought to recognise 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.

Uniprot ID: Q12918

NCBI: NP_002249

GeneID: 3820

Host / Isotype: Mouse / IgG2a

Clone: PK136

Immunogen: Spleen and bone marrow cells from CE mice

Format:
State: Lyophilized purified IgG fraction
Purification: Affinity Chromatography on Protein A.
Buffer System: PBS, pH 7.4, containing 0.09% Sodium Azide as preservative and 1% BSA as stabilizer.
Label: PE – R. Phycoerythrin (RPE)
Reconstitution: Restore with distilled water.

Applications: Flow cytometry: use 10 ul of neat antibody to label 10e6 cells in 100 µl.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: The antibody recognizes the mouse NK1.1 cell surface antigen.
This antibody 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).
The antibody has also been used for in vivo depletion of NK cells and in vitro activation of NK cells.
Species: Mouse. Does not react with Rat and Human.
Other species not tested.

Storage:

Prior to and following reconstitution store undiluted at 2-8°C.
DO NOT FREEZE!
This product is photosensitive and should be protected from light.
Shelf life: one year from despatch.

General Readings:

1. Koo GC, Peppard JR. Establishment of monoclonal anti-Nk-1.1 antibody. Hybridoma. 1984 Fall;3(3):301-3. PubMed PMID: 6500587.
2. Koo GC, Dumont FJ, Tutt M, Hackett J, Kumar V. The NK-1.1(-) mouse: a model to study differentiation of murine NK cells. J Immunol. 1986 Dec 15;137(12):3742-7. PubMed PMID: 3782794.
3. Kung, S.K.P. and Miller, R.G. (1995) The NK1.1 antigen in NK-mediated FI antiparent killing in vitro. J. Immunol. 154: 1624-1633.
4. Wang M, Ellison CA, Gartner JG, HayGlass KT. Natural killer cell depletion fails to influence initial CD4 T cell commitment in vivo in exogenous antigen-stimulated cytokine and antibody responses. J Immunol. 1998 Feb 1;160(3):1098-105. PubMed PMID: 9570522.
5. Arase N, Arase H, Park SY, Ohno H, Ra C, Saito T. 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. 1997 Dec 15;186(12):1957-63. PubMed PMID: 9396764.
6. Carlyle JR, Martin A, Mehra A, Attisano L, Tsui FW, Zúñiga-Pflücker JC. Mouse NKR-P1B, a novel NK1.1 antigen with inhibitory function. J Immunol. 1999 May 15;162(10):5917-23. PubMed PMID: 10229828.

Pictures:

Staining of New Zealand Black mouse peripheral blood lymphocytes with Mouse anti Mouse NK cells - RPE (SM067R/RT)