RayBiotech, Inc.

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Certificate of Analysis and Data Sheet

Mouse Anti-Mouse NK-1.1 Antigen:Biotin

Catalog No.	Target Species	Isotype
DS-MB-03459	Mouse	IgG2a

Preparation

Synonyms: LY55B, LY55C, NKRP1B, NKRP1C
Purification: Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
Immunogen: Spleen and bone marrow cells from CE mice
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

DS-MB-03459 recognizes the mouse NK1.1 cell surface antigen, a cell surface glycoprotein encoded by members of the NKR-P1 gene family. 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 recognize only CD161c, recent data has shown that DS-MB-03459 may also react with CD161b. CD161c expression itself is strain specific in mice, but recognition of CD161b by this antibody appears to be even more complex, as only some CD161b positive strains are labeled by the antibody. Engagement of CD161c has been reported to have activating function in NK cells, whilst engagement of CD161b is inhibitory.

DS-MB-03459 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. The antibody has also been used for *in vivo* depletion of NK cells and *in vitro* activation of NK cells.
Species Cross Reactivity: Does not react with Rat, Human

Formulation

Product Type: Monoclonal Antibody
Product Form: Purified IgG conjugated to Biotin - liquid
Buffer Solution: Phosphate buffered saline, pH 7.4
Preservative Stabilizers: 0.09% Sodium Azide (NaN_3), 1% Bovine Serum Albumin
Approx. Protein Concentrations: IgG concentration 0.1 mg/ml

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Applications

Options / Functions	YES	NO	Not determined	Recommended Work dilution or concentration
Flow Cytometry (1)	•			Neat
Immunohistology - Paraffin			•	
ELISA			•	
Western Blotting			•	

Note: Other applications are not tested yet. Optimal dilutions should be determined.
(1) Use 10ul of the suggested working dilution to label 1 x 10^6 cells in 100ul.

Storage

Store at +4°C or at -20°C if preferred.
Storage in frost-free freezers is not recommended.
This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Shelf Life: 18 months from date of dispatch.

Reference

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3. Kung, S.K.P. and Miller, R.G. (1995) The NK1.1 antigen in NK-mediated F1 antiparent killing *in vitro*. J. Immunol. 154: 1624-1633.
4. 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. Immunol. 160: 1098-1105.
5. 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: 1957-1963.
6. Kung, S.K.P. *et al*. (1999) The NKR-P1B gene product is an inhibitory receptor on SJL/J NK cells. J. Immunol. 162: 5876-5887.
7. Carlyle, J.R. *et al*. (1999) Mouse NKR-P1B, a novel NK1.1 antigen with inhibitory function. J.Immunol. 162: 5917-5923.