Technical Data Sheet

PE Rat Anti-Mouse CD121b

Product Information

Material Number:
Alternate Name:
Size:
Concentration:
Clone:
Immunogen:
Isotype:
Reactivity:
Storage Buffer:

554450

Il1r2; IL-1RII; IL-1R2; Il1rb; IL-1Rβ; IL-1R-beta; IL-1 receptor beta chain 0.2 mg 0.2 mg/ml 4E2 Mouse IL-1RII Protein Rat (LEW) IgG2a, ĸ QC Testing: Mouse Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The 4E2 monoclonal antibody specifically binds to CD121b which is also known as the IL-1 receptor type II (IL-1RII, IL-1R2) or IL-1 receptor beta (IL-1R-beta, IL-1Rβ). CD121b is encoded by the *Il1r2* gene and presents as a 68 kDa type I transmembrane glycoprotein. It is expressed on a variety of cell types including B cells, neutrophils, monocytes, and bone marrow progenitor cells. A soluble form of CD121b is produced by proteolysis especially after cellular activation. Unlike the IL-1 type I receptor (CD121a), CD121b has a short cytoplasmic domain and does not mediate IL-1 signaling. CD121b may function in a membrane or soluble form as a decoy receptor that can bind IL-1 and reduce its effective concentration and biological activity. The 4E2 antibody blocks IL-1 binding to the IL-1 receptor type II.



Flow cytometric analysis of mouse CD121b. Balb/c bone marrow was stained with either PE Rat IgG2a, K Isotype Control (Cat. No. 553930, shaded histogram) or PE Rat anti-Mouse CD121b (open histogram).

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze. The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

Application								
Flow cytometry Routinely Tester								
Suggeste	d Compani	on Product	S					
Catalog Number		Name	Name				Clone	
553930		PE Rat IgG2a, κ Isotype Control				0.1 mg	R35-95	
554656		Stain Buffer (FBS)				500 ml	(none)	
BD Bioscie	ences							
bdbiosciences.com								DT
United States 877.232.8995	Canada 800.979.9408	Europe 32.53.720.550	Japan 0120.8555.90	Asia Pacific 65.6861.0633	Latin America/Caribbean 55.11.5185.9995			DL
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Product Notices

- Since applications vary, each investigator should titrate the reagent to obtain optimal results. 1.
- Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols. 2.
- Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before 3. discarding to avoid accumulation of potentially explosive deposits in plumbing.
- For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at 4. www.bdbiosciences.com/colors.
- 5. An isotype control should be used at the same concentration as the antibody of interest.

References

Colotta F, Re F, Muzio M, et al. Interleukin-1 type II receptor: a decoy target for IL-1 that is regulated by IL-4. Science. 1993; 261(5120):472-475. (Biology) Cumberbatch M, Dearman RJ, Kimber I. Characteristics and regulation of the expression on interleukin 1 receptors by murine Langerhans cells and keratinocytes. Arch Dermatol Res. 1998; 290(12):688-695. (Clone-specific: Flow cytometry)

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Hunter CA, Chizzonite R, Remington JS. IL-1 beta is required for IL-12 to induce production of IFN-gamma by NK cells. A role for IL-1 beta in the T cell-independent mechanism of resistance against intracellular pathogens. J Immunol. 1995; 155(9):4347-4354. (Clone-specific: Neutralization) McMahan CJ, Slack JL, Mosley B, et al. A novel IL-1 receptor, cloned from B cells by mammalian expression, is expressed in many cell types. EMBO J. 1991; 10(10):2821-2832. (Biology)

Oldenburg HS, Pruitt JH, Lazarus DD, Rogy MA, Chizzonite R, Lowry SF, Moldawer LL. Interleukin 1 binding to its type I, but not type II receptor, modulates the in vivo acute phase response. Cytokine. 1995; 7(6):510-516. (Clone-specific)

Zola H. Detection of cytokine receptors by flow cytometry. In: Coligan JE, Kruisbeek AM, Margulies DH, Shevach EM, Strober W, ed. Current Protocols in Immunology. New York: Green Publishing Associates and Wiley-Interscience; 1995:6.21.1-6.21.18. (Methodology: Flow cytometry)

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United States
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 800.979.9408
 32.53.720.550
 0120.8555.90
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