Technical Data Sheet

Biotin Mouse Anti-Human CD131

Product Information

Material Number:	554535	
Alternate Name:	Cytokine receptor common β chain; CDw131; IL-3Rβ; IL-5Rβ	
Size:	0.5 mg	
Concentration:	0.5 mg/ml	
Clone:	3D7	
Immunogen:	Human CD131 Transfected COS Cells	
Isotype:	Mouse IgG1, ĸ	
Reactivity:	QC Testing: Human	
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.	

Description

The 3D7 antibody reacts with CD131, the 120 kD common β chain (β c) which is shared with the receptor complexes for human granulocyte-macrophage colony stimulating factor (GM-CSFR), interleukin-3 (IL-3R) and interleukin-5 (IL-5R). Together with the α subunit of either the IL-3R (IL-3R α), IL-5R (IL-5R α), or GM- CSFR (GM-CSFR α), the common β chain forms high-affinity, signaling receptors for human IL-3, IL-5 and GM-CSF, respectively. Cell surface β c are expressed by a variety of different cell types including hematopoietic progenitor cells derived from pluripotent stem cells, monocytes, neutrophils, eosinophils, basophils, endothelial cells, fibroblasts, and Langerhans cells. The immunogen used to generate this hybridoma was cells co-transfected with expression vectors which contained cDNA for the human IL-3 α and β chains.



Flow cytometric analysis of human CD131 on GM-CSFR (β chain) transfectant CHO cells. Transfected CHO cells were stained with either Biotin Mouse Anti-Human CD131 (solid line) or Biotin Mouse IgG1 κ Isotype Control (Cat. No. 550615; dotted line) followed by staining with PE Streptavidin (Cat.No. 554061). Flow cytometric analysis was performed using a BD FACScan[™] (BDIS, San Jose, CA).

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 biotin under optimum conditions, and unreacted biotin was removed.

Application Notes

application

	Flow cytometry
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Routinely Tested

Recommended Assay Procedure:

Due to the frequent observation of low level expression of cytokine βc receptors, it is recommended that investigators use PE Streptavidin (Cat. No. 554061) or PE-Cy^{™5} Streptavidin (Cat. No. 554062) rather than FITC Streptavidin to detect binding of Biotin Mouse Anti-Human CD131.

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554062	PE-Cy [™] 5 Streptavidin	0.1 mg	(none)
554061	PE Streptavidin	0.5 mg	(none)
550615	Biotin Mouse IgG1 K Isotype Control	0.25 mg	MOPC-31C
554656	Stain Buffer (FBS)	500 mL	(none)

Product Notices

- Since applications vary, each investigator should titrate the reagent to obtain optimal results. 1.
- 2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before
- discarding to avoid accumulation of potentially explosive deposits in plumbing.
- 4. Cy is a trademark of Amersham Biosciences Limited.
- An isotype control should be used at the same concentration as the antibody of interest. 5.
- For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at 6. www.bdbiosciences.com/colors.

References

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Woodcock JM, Zacharakis B, Plaetinck G. Three residues in the common beta chain of the human GM-CSF, IL-3 and IL-5 receptors are essential for GM-CSF and IL-5 but not IL-3 high affinity binding and interact with Glu21 of GM-CSF. EMBO J. 1994; 13(21):5176-5185. (Biology)

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