

Technical Data Sheet

Purified Mouse Anti-Human CD131

Product Information

Material Number:	554534
Alternate Name:	Cytokine receptor common β chain; CDw131; IL-3R β ; IL-5R β
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	3D7
Immunogen:	Human CD131 Transfected COS Cells
Isotype:	Mouse IgG1, κ
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 (βc) 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 βc 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.

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Flow cytometry	Routinely Tested
Immunoprecipitation/Western blot	Reported

Recommended Assay Procedure:

Immunofluorescent Staining and Flow Cytometric Analysis: The various formats of the 3D7 antibody are useful for the immunofluorescent staining and flow cytometric analysis of cells for βc expression. Purified Mouse Anti-Human CD131 (Cat. No. 554534) can be used in conjunction with Biotin Goat Anti-Mouse Ig (Cat. No. 553999) with no cross reactivity to human Ig and PE-Streptavidin (Cat. No. 554061) in a three-layer staining procedure to amplify immunofluorescent signals for the flow cytometric analysis of cytokine receptor-expressing cells.

Immunoprecipitation: Purified Mouse Anti-Human CD131 (Cat. No. 554534) can be used to immunoprecipitate βc receptors. Please note that this application is not routinely tested at BD Pharmingen™.

Suggested Companion Products

Catalog Number	Name	Size	Clone
553999	Biotin Goat Anti-Mouse Ig (Multiple Adsorption)	0.5 mg	Polyclonal
554061	PE Streptavidin	0.5 mg	(none)
554656	Stain Buffer (FBS)	500 mL	(none)
555746	Purified Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-21

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
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. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.

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References

- Macardle PJ, Chen Z, Shih CY, Huang CM, Weedon H, Sun Q, Lopez AF, Zola H. Characterization of human leucocytes bearing the IL-3 receptor. *Cell Immunol.* 1996; 168(1):59-68. (Clone-specific: Flow cytometry)
- 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)
- 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. (Biology)
- Zola H, Swart B, Banham A, et al. CD molecules 2006—Human cell differentiation molecules. *J Immunol Methods.* 2007; 319(1-2):1-5. (Clone-specific)

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