Technical Data Sheet

BV480 Rat Anti-Human CD132

Product Information

Material Number:	746836
Size:	50 µg
Clone:	TUGh4
Alternative Name:	IL-2RG; IL-2Rγ; γc; Common γ chain; Common gamma chain; gamma c; SCIDX1
Reactivity:	Human (Tested in Development)
Isotype:	Rat IgG2b, κ
Immunogen:	Human γc Transfected Cell Line
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Entrez Gene ID:	3561
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

Description

The TUGh4 monoclonal antibody specifically binds to CD132. CD132 is a 65-70 kDa type 1 transmembrane glycoprotein that is encoded by the IL2RG (interleukin 2 receptor, gamma) gene. CD132 is also known as the common γ subunit (γc) and is shared by the IL-2, IL-4, IL-7, IL-9, IL-15 and IL-21 receptor complexes. CD132 is broadly expressed by most peripheral T and B lymphocytes, NK cells, monocytes, and granulocytes. The cytoplasmic domain of the γc chain plays an important role in cytokine-mediated signal transduction. Mutation of the IL2RG gene results in X-linked severe combined immunodeficiency (XSCID). The TUGh4 antibody recognizes a different epitope from that recognized by the CD132-specific clone, AG184.

The antibody was conjugated to BD Horizon™ BV480 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 436-nm and Em Max at 478-nm, BD Horizon BV480 can be excited by the violet laser and detected in the BD Horizon BV510 (525/40-nm) filter set. BV480 has less spillover into the BV605 detector and, in general, is brighter than BV510.

Preparation and Storage Section

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 BD Horizon BV480 under optimal conditions that minimize unconjugated dye and antibody.

Recommended Assay Procedure

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes (including BD OptiBuild Brilliant reagents) are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794).

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS) RUO	500 mL	
554657	Stain Buffer (BSA) RUO	500 mL	
563794	Brilliant Stain Buffer RUO	100 Tests	
555899	Lysing Buffer RUO	100 mL	
349202	Lysing Solution 10X Concentrate IVD	100 NA	
564219	Human BD Fc Block™ RUO	50 mg	
565649	BV480 Rat IgG2b, κ Isotype Control RUO	50 µg	

Product Notices

1. This antibody was developed for use in flow cytometry.
2. The production process underwent stringent testing and validation to assure that it generates a high-quality conjugate with consistent performance and specific binding activity. However, verification testing has not been performed on all conjugate lots.
3. Researchers should determine the optimal concentration of this reagent for their individual applications.
4. An isotype control should be used at the same concentration as the antibody of interest.
5. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Please refer to www.bdbiosciences.com/us/s/resources for technical protocols.
8. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
9. BD Horizon Brilliant Violet 480 is covered by one or more of the following US patents: 8,575,303; 8,354,239.

References

Ishii N, Kondo M, Takeshita T, and Sugamura K. mAb specific for the γ chain of the IL-2 receptor. In: Schlossman SF. Stuart F. Schlossman .. et al., ed. Leucocyte typing V : white cell differentiation antigens : proceedings of the fifth international workshop and conference held in Boston, USA, 3-7 November, 1993. Oxford: Oxford University Press; 1995; :1867-1868.
Ishii N, Takeshita T, Kimura Y, et al. Expression of the IL-2 receptor gamma chain on various populations in human peripheral blood. Int Immunol. 1994; 6(8):1273-1277.
Matsuoka M, Takeshita T, Ishii N, Nakamura M, Ohkubo T, Sugamura K. Kinetic study of interleukin-2 binding on the reconstituted interleukin-2 receptor complexes including the human gamma chain. Eur J Immunol. 1993; 23(10):2472-2476.
Tanaka N, Sugamura K. CD132 (interleukin 2 γ chain (common γ) Workshop Panel report. In: Kishimoto T. Tadamitsu Kishimoto .. et al., ed. Leucocyte typing VI : white cell differentiation antigens : proceedings of the sixth international workshop and conference held in Kobe, Japan, 10-14 November 1996. New York: Garland Pub.; 1997; :861-864.

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