

## Technical Data Sheet

## Biotin Rat Anti-Mouse CD132

## Product Information

<b>Material Number:</b>	<b>554470</b>
<b>Alternate Name:</b>	Cytokine Common $\gamma$ chain, $\gamma_c$
<b>Size:</b>	0.5 mg
<b>Concentration:</b>	0.5 mg/ml
<b>Clone:</b>	TUGm2
<b>Isotype:</b>	Rat (WI) IgG2b, $\kappa$
<b>Reactivity:</b>	QC Testing: Mouse
<b>Storage Buffer:</b>	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

## Description

The TUGm2 antibody reacts with Mouse CD132 which is also known as the common  $\gamma$  subunit ( $\gamma_c$ ). The  $\gamma_c$  chain subunit is shared by the IL-2, IL-4, IL-7, IL-9, and IL-15 receptor complexes. The  $\gamma_c$  receptor is expressed constitutively at low levels by most lymphocytes, myeloid cells, embryonic thymocytes, and lymphoid cell lines. The  $\gamma_c$  receptor is a 75-80 kD transmembrane glycoprotein which mediates signal transducing activities of cytokine receptor complexes with which it is associated. TUGm2 antibody can significantly block the binding of and proliferative response to IL-4 by CTLL-2 cells. It can also inhibit binding to high-affinity IL-2 receptors expressed by CTLL-2 cells. By itself, the TUGm2 antibody reportedly fails to significantly inhibit CTLL-2 proliferative responses to IL-2. However, when added along with TM- $\beta$ 1 (Cat. No. 553359), specific for the mouse IL-2R $\beta$  chain, TUGm2 was shown to synergistically reduce IL-2-driven CTLL-2 proliferative responses. TUGm2 can reduce the IL-7-induced proliferation of Con A-activated mouse splenocytes and the IL-7 responsive pre-B cell line, IxN/2b.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.

## Preparation and Storage

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.

Store undiluted at 4° C and protected from prolonged exposure to light. Do not freeze.

## Application Notes

## Application

Flow cytometry	Routinely Tested
Blocking	Reported
Neutralization	Reported

## Recommended Assay Procedure:

Suggested applications include immunofluorescent staining with flow cytometric analysis. An appropriate isotype control for the biotin-conjugated antibody is Cat. No. 553987. An appropriate format of the TUGm2 antibody for blocking and neutralization studies is Cat. No. 554469.

## Suggested Companion Products

Catalog Number	Name	Size	Clone
553987	Biotin Rat IgG2b, $\kappa$ Isotype Control	0.25 mg	A95-1
554061	PE Streptavidin	0.5 mg	(none)

## 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](http://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.

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## References

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- Kondo M, Takeshita T, Ishii N, et al. Sharing of the interleukin-2 (IL-2) receptor gamma chain between receptors for IL-2 and IL-4. *Science*. 1993; 262(5141):1874-1877.(Clone-specific: Blocking, Neutralization)