Technical Data Sheet

# Purified Rat Anti-Human GM-CSF

## Product Information

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| **Material Number:** | **554502** |
| **Size:** | 0.5 mg |
| **Concentration:** | 0.5 mg/ml |
| **Clone:** | BVD2-23B6 |
| **Immunogen:** | E. coli-expressed recombinant human GM-CSF |
| **Isotype:** | Rat IgG2a |
| **Reactivity:** | QC Testing: Human |
| **Storage Buffer:** | Aqueous buffered solution containing ≤0.09% sodium azide. |

## Description

The BVD2-23B6 antibody reacts with human granulocyte/macrophage - colony stimulating factor (GM-CSF). The immunogen used to generate the BVD2-23B6 hybridoma was *E. coli*-expressed recombinant human GM-CSF. This is a neutralizing antibody.

This antibody is routinely tested by ELISA 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.
Store undiluted at 4° C.

## Application Notes

**Application**

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| ELISA Capture | Routinely Tested |
| Immunoprecipitation/Western blot | Tested During Development |
| Neutralization | Tested During Development |

**Recommended Assay Procedure:**

**ELISA Capture:** The purified BVD2-23B6 antibody (Cat. No. 554502) is useful as a capture antibody in a sandwich ELISA for measuring human GM-CSF protein levels. The purified BVD2-23B6 antibody can be paired with the biotinylated BVD2-21C11 antibody (Cat. No. 554505) as the detection antibody, with recombinant human GM-CSF (Cat. No. 550068) as the standard. Purified BVD2-23B6 antibody should be titrated 2 - 6 µ/ml to determine optimal concentration for ELISA capture. To obtain linear standard curves, doubling dilutions of GM-CSF standard ranging from ~2,000 to 15 pg/ml are recommended for inclusion in each ELISA plate.

This ELISA pair shows no cross-reactivity with any of the cytokines tested (e.g., mouse IL-1β, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-9, IL-10, IL-12 p70, IL-15, GM-CSF, IFN-γ, MCP-1, TCA-3, TNF-α; human IL-1α, IL-1β, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12 p70, IL-12 p40, IL-13, IL-15, G-CSF, IFN-γ, lymphotactin, MCP-1, MCP-2, MIP-1α, MIP-1β, NT-3, PDGF-AA, sCD23 , SCF, TNF, LT-α, VEGF; rat IL-2, IL-4, IL-6, IL-10, GM-CSF, IFN-γ, TNF).

This ELISA pair is recommended primarily for measuring cytokine from experimental cell culture systems. These ELISA reagents are not recommended for assay of serum samples. For testing human GM-CSF in complex biological fluids such as serum or plasma, our Human GM-CSF BD OptEIA™ ELISA Set (Cat. No. 555126) is recommended.

**Neutralization:** The NA/LE format of the BVD2-23B6 antibody (Cat. No. 554501) is useful for neutralization of human GM-CSF bioactivity. A suitable NA/LE. rat IgG2a isotype control is the R35-95 antibody, (Cat. No. 554687).

**IP/WB:** The BVD2-23B6 antibody (e.g., Cat. No. 554502) has been reported to be useful for immunoprecipitation studies. For Western blotting, a concentration of 1 µ/ml has been found to enable visualization of ≤ 100 ng/lane of recombinant human GM-CSF (e.g., Cat. No. 550068), under reducing conditions.

**BD Biosciences**

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## Suggested Companion Products

| Catalog Number | Name | Size | Clone |
|---|---|---|---|
| 554505 | Biotin Rat Anti-Human GM-CSF | 0.5 mg | BVD2-21C11 |
| 550068 | Recombinant Human GM-CSF | 10 µg | (none) |
| 555126 | Human GM-CSF ELISA Set | 20 tests | (none) |
| 554501 | Purified Rat Anti-Human NA/LE | 25 mg | B27 |

## 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.

## References


Abrams JS, Roncarolo MG, Yssel H, Andersson U, Gleich GJ, Silver JE. Strategies of anti-cytokine monoclonal antibody development: immunoassay of IL-10 and IL-5 in clinical samples. *Immunol Rev.* 1992; 127:5-24.(Clone-specific: ELISA, Immunoprecipitation, Neutralization)

Abrams JS, Silver J, Van Dyke R, Gleich G. Eosinophil-active cytokines in human disease: development and use of monoclonal antibodies to IL-3, IL-5, GMCSF. In: Kay A and Gleich G, ed. *Eosinophils in Allergy and Inflammation.* 1994:133-157.(Clone-specific: ELISA, Neutralization)

Bacchetta R, de Waal Malefijt R, Yssel H. Host-reactive CD4+ and CD8+ T cell clones isolated from a human chimera produce IL-5, IL-2, IFN-gamma and granulocyte/macrophage-colony-stimulating factor but not IL-4. *J Immunol.* 1990; 144(3):902-908.(Clone-specific: ELISA, Neutralization)

Kita H, Ohnishi T, Okubo Y, Weiler D, Abrams JS, Gleich GJ. Granulocyte/macrophage colony-stimulating factor and interleukin 3 release from human peripheral blood eosinophils and neutrophils. *J Exp Med.* 1991; 174(3):745-748.(Clone-specific: ELISA, Neutralization)