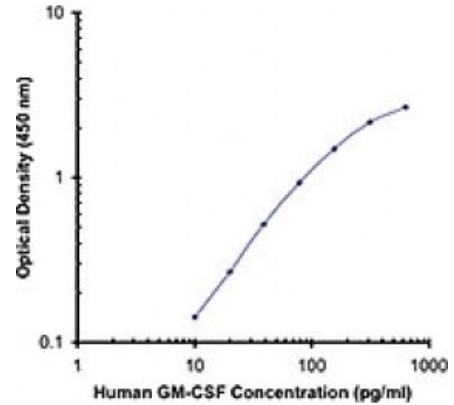


Biotin anti-human GM-CSF

Catalog # / Size: 3111520 / 500 µg
Clone: BVD2-21C11
Isotype: Rat IgG2a, κ
Immunogen: *E. coli*-expressed, recombinant human GM-CSF.
Reactivity: Human
Preparation: The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions. The solution is free of unconjugated biotin.
Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Concentration: 0.5



Applications:

Applications: Other

Recommended Usage: Each lot of this antibody is quality control tested by ELISA assay. For use as an ELISA detection antibody, a concentration range of 0.25-1.0 microg/ml is recommended. To obtain a linear standard curve, serial dilutions of human GM-CSF protein ranging from 500 to 4 pg/ml are recommended for each ELISA plate. It is recommended that the reagent be titrated for optimal performance for each application.

Application Notes: **ELISA¹⁻⁴ or ELISPOT^{3,4} Detection:** The biotinylated BVD2-21C11 antibody is useful as a detection antibody in a sandwich ELISA or ELISPOT assay, when used in conjunction with the purified BVD2-23B6 antibody (Cat. No. 502202/502204) as the capture antibody.

Flow Cytometry: The fluorochrome-labeled BVD2-21C11 is useful for intracellular immunofluorescent staining and flow cytometric analysis to identify GM-CSF-producing cells within mixed cell populations.

Neutralization: The BVD2-21C11 antibody can neutralize the bioactivity of natural or recombinant GM-CSF1.

Additional reported applications (for the relevant formats) include: immunoprecipitation¹, Western blotting, immunohistochemical staining of paraformaldehyde-fixed, saponin-treated^{5,6} and acetone-fixed⁷ frozen tissue sections, and immunocytochemistry.

Note: For testing human GM-CSF in serum or plasma, BioLegend's ELISA Max™ Sets (Cat. No. 432001 to 432006) are specially developed and recommended.

- Application References:**
1. Abrams J, *et al.* 1992. *Immunol. Rev.* 127:5. (ELISA, Neut, IP)
 2. Abrams J, *et al.* 1994. *Eosinophils in Allergy and Inflammation.* Marcel Dekker New York. p.133. (ELISA)
 3. Bacchetta R, *et al.* 1990. *J. Immunol.* 144:902. (ELISA)
 4. Kita H, *et al.* 1991. *J. Exp. Med.* 174:745. (ELISA)
 5. Andersson U, *et al.* 1999. *Detection and quantification of gene expression.* New York:Springer-Verlag. (IHC)
 6. Andersson J, *et al.* 1994. *Immunology* 83:16. (IHC)
 7. Rasouli J, *et al.* 2015. *J. Immunol.* 11:5085-93. (IHC)

Description: Granulocyte/macrophage - colony stimulating factor (GM-CSF) is a hematopoietic

factor that is produced by activated T cells, B cells, mast cells, macrophages, fibroblasts, and endothelial cells. In addition to supporting colony formation of granulocyte/macrophage progenitors, GM-CSF is a growth factor for erythroid, megakaryocyte, and eosinophil progenitors.

**Antigen
References:**

1. Fitzgerald K, *et al.* Eds. 2001. The Cytokine FactsBook. Academic Press San Diego.
2. Demetri G, *et al.* 1991. *Blood* 78:2791.
3. Fan D, *et al.* 1991. *In vivo* 5:571.
4. Negrin R, *et al.* <