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**Purified anti-human GM-CSF**

<b>Catalog # / Size:</b>	3111510 / 500 µg 3111505 / 50 µg
<b>Clone:</b>	BVD2-21C11
<b>Isotype:</b>	Rat IgG2a, κ
<b>Immunogen:</b>	<i>E. coli</i> -expressed, recombinant human GM-CSF.
<b>Reactivity:</b>	Human
<b>Preparation:</b>	The antibody was purified by affinity chromatography.
<b>Formulation:</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Concentration:</b>	0.5

**Applications:**

<b>Applications:</b>	Other
<b>Recommended Usage:</b>	Each lot of this antibody is quality control tested by ELISA assay. The purified BVD2-21C11 antibody is useful as the capture antibody in a sandwich ELISA assay, when used in conjunction with the biotinylated BVD2-23B6 antibody as the detecting antibody, a concentration range of 1-4 microg/ml (BVD2-21C11) is recommended. For flow cytometric application, the suggested use of this reagent is ≤ 0.5 microg per 10 <sup>6</sup> cells in 100 microL volume. The purified BVD2-21C11 has been tested by blocking fluorochrome conjugated BVD2-21C11 for intracellular cytokine staining. In order to obtain complete blocking results, a saturated amount of purified antibody (≤ 5.0 ug/million cells) should be used for incubation with target cells, prior to staining with fluorochrome conjugated antibody. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Application Notes:</b>	Additional reported applications (for the relevant formats) include: ELISA <sup>1-4</sup> or ELISPOT <sup>3,4</sup> Detection, Neutralization <sup>1</sup> , immunohistochemical staining of paraformaldehyde-fixed, saponin-treated <sup>5,6</sup> and acetone-fixed <sup>7</sup> frozen tissue sections, and immunocytochemistry.
	<b>Note:</b> For testing human GM-CSF in serum or plasma, BioLegend's ELISA Max™ Sets (Cat. No. 432001 to 432006) are specially developed and recommended.
<b>Application References:</b>	<ol style="list-style-type: none"> <li>1. Abrams J, <i>et al.</i> 1992. <i>Immunol. Rev.</i> 127:5. (ELISA, Neut, IP)</li> <li>2. Abrams J, <i>et al.</i> 1994. <i>Eosinophils in Allergy and Inflammation</i>. Marcel Dekker New York. p.133. (ELISA)</li> <li>3. Bacchetta R, <i>et al.</i> 1990. <i>J. Immunol.</i> 144:902. (ELISA)</li> <li>4. Kita H, <i>et al.</i> 1991. <i>J. Exp. Med.</i> 174:745. (ELISA)</li> <li>5. Andersson U, <i>et al.</i> 1999. <i>Detection and quantification of gene expression</i>. New York:Springer-Verlag. (IHC)</li> <li>6. Andersson J, <i>et al.</i> 1994. <i>Immunology</i> 83:16. (IHC)</li> <li>7. Rasouli J, <i>et al.</i> 2015. <i>J. Immunol.</i> 11:5085-93. (IHC)</li> </ol>

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**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,

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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.* <