

Datasheet: PHP235

Description:	RECOMBINANT HUMAN GM-CSF
Name:	GM-CSF
Other names:	GRANULOCYTE MACROPHAGE COLONY STIMULATING FACTOR
Format:	Rec. Protein
Product Type:	Recombinant Protein
Quantity:	20 µg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
ELISA	▪			0.2 - 0.4ng/well
Western Blotting	▪			1.5 - 3.0ng/lane
Functional Assays	▪			1.0ng/ml

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

Target Species	Human
Product Form	Purified recombinant protein - lyophilised
Reconstitution	Reconstitute with 0.2ml distilled water Care should be taken during reconstitution as the protein may appear as a film at the bottom of the vial. Bio-Rad recommend that the vial is gently mixed after reconstitution. For extended storage, the addition of 0.1% bovine serum albumin (BSA) is recommended.
Preparation	Purified recombinant GM-CSF expressed in <i>E. coli</i> .
Preservative Stabilisers	10mM Sodium citrate pH3.5
Endotoxin Level	<1EU/ug
Approx. Protein Concentrations	0.1mg/ml after reconstitution
External Database Links	UniProt: P04141 Related reagents Entrez Gene:

Synonyms	GMCSF
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Product Information	<p>Recombinant Human granulocyte-macrophage colony stimulating factor is a highly purified preparation of <i>E. coli</i> produced human GM-CSF.</p> <p>GM-CSF (granulocyte-macrophage colony-stimulating factor) is a haematopoietic growth factor which exists in both glycosylated and non-glycosylated biologically active forms, and stimulates the development of granulocytes, macrophages, early megakaryocytes and eosinophil progenitor cells. The ability of recombinant GM-CSF to increase haematopoietic cell recovery has become a focus area in the therapeutic treatment of patients following bone marrow transplantation.</p>
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Molecular Weight	14.6kD (128 amino acid residues)
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Activity	The ED ₅₀ as determined by the dose-dependent stimulation of the proliferation of human TF-1 cells is ≤ 0.1 ng/ml, corresponding to a specific activity of ≥ 1 x 10 ⁷ units/mg.
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Purity	>98% by SDS PAGE/HPLC analysis
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ELISA	Recombinant human GM-CSF may be used as the standard in an ELISA application with a purified human GM-CSF antibody (AHP772).
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Western Blotting	Recombinant human GM-CSF may be used as a positive control for Western Blotting applications with a purified human GM-CSF antibody (AHP772).
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References	<ol style="list-style-type: none">1. Radford, D.J. <i>et al.</i> (2010) Dehydroepiandrosterone sulfate directly activates protein kinase C-beta to increase human neutrophil superoxide generation. Mol Endocrinol. 24: 813-21.2. Abediankenari, S, & Ghasemi, M. (2009) Generation of immune inhibitory dendritic cells and CD4+T regulatory cells inducing by TGF-beta. Iran J Allergy Asthma Immunol. 8: 25-303. Abediankenari, S. <i>et al.</i> (2011) Human Leukocyte Antigen-G Expression on Dendritic Cells Induced by Transforming Growth Factor-Beta1 and CD4+ T Cells Proliferation. Iran Biomed J. 15: 1-5.4. Olivetta, E. <i>et al.</i> (2005) HIV-1 Nef regulates the release of superoxide anions from human macrophages. Biochem J. 390: 591-602.5. Manfredi, F. <i>et al.</i> (2016) The CD8⁺ T Cell-Mediated Immunity Induced by HPV-E6 Uploaded in Engineered Exosomes Is Improved by ISCOMATRIX™ Adjuvant. Vaccines (Basel). 4 (4): pii: E42.6. Anticoli, S. <i>et al.</i> (2016) Engineered exosomes boost the HCV NS3-specific CD8⁺ T lymphocyte immunity in humans Trials in Vaccinology. 5: 105-10.
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Storage	<p>Prior to reconstitution store at +4°C. Following reconstitution store at -20°C.</p> <p>This product should be stored undiluted.</p> <p>Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the protein. Should this product contain a precipitate we recommend microcentrifugation before use.</p>
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Shelf Life	3 months from date of reconstitution.
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Health And Safety Information	Material Safety Datasheet documentation #10268 available at: 10268: https://www.bio-rad-antibodies.com/uploads/MSDS/10268.pdf
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