

GM-CSF Protein, Rhesus macaque

Cat. No.:	HY-P7184
Synonyms:	rRhGM-CSF; CSF2; Colony stimulating factor 2
Species:	Rhesus Macaque
Source:	E. coli
Accession:	Q9GL44 (A18-E144)
Gene ID:	574371
Molecular Weight:	Approximately 14.4 kDa

PROPERTIES

AA Sequence	<p>A P A R S P S P G T Q P W E H V N A I Q E A R R L L N L S R D T A A E M N K T V</p> <p>E V V S E M F D L Q E P S C L Q T R L E L Y K Q G L Q G S L T K L K G P L T M M</p> <p>A S H Y K Q H C P P T P E T S C A T Q I I T F Q S F K E N L K D F L L V I P F D</p> <p>C W E P V Q E</p>
Biological Activity	The ED ₅₀ is <0.1 ng/mL as measured by human TF-1 cells, corresponding to a specific activity of >1.0 × 10 ⁷ units/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized after extensive dialysis against PBS, pH 7.4 or 50 mM Tris-HCL, 300 mM NaCl, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>Granulocyte Macrophage Colony Stimulating Factor (GM-CSF) is a monomeric glycoprotein that functions as a cytokine—it is a white blood cell growth factor^[1]. GM-CSF stimulates stem cells to produce granulocytes (neutrophils, eosinophils, and basophils) and monocytes. Monocytes exit the circulation and migrate into tissue, whereupon they mature into macrophages and dendritic cells. GM-CSF also has some effects on mature cells of the immune system. These include, for example, inhibiting neutrophil migration and causing an alteration of the receptors expressed on the cells surface^[2]. GM-CSF also plays a role in embryonic development by functioning as an embryokine produced by reproductive tract^[3].</p>
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REFERENCES

- [1]. Francisco-Cruz A, et al. Granulocyte-macrophage colony-stimulating factor: not just another haematopoietic growth factor. *Med Oncol*. 2014 Jan;31(1):774.
 - [2]. Gasson JC, et al. Molecular physiology of granulocyte-macrophage colony-stimulating factor. *Blood*. 1991 Mar 15;77(6):1131-45.
 - [3]. Hansen PJ, et al. Programming of the preimplantation embryo by the embryokine colony stimulating factor 2. *Anim Reprod Sci*. 2014 Sep;149(1-2):59-66.
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Caution: Product has not been fully validated for medical applications. For research use only.

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