

## Product datasheet for **TP728221S**

### Recombinant GM-CSF (Granulocyte-macrophage colony-stimulating factor), Human

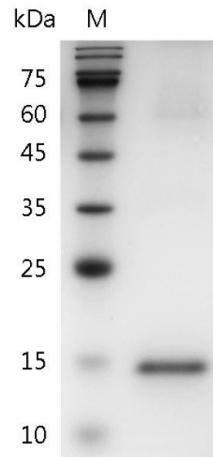
#### Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant GM-CSF (Granulocyte-macrophage colony-stimulating factor), Human
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	APARSPSPSTQPWEHVNAIQEARRLLNLSRDAAEMNETVEISEMFDLQEPTCLQTRLELYKQGLRGSLT KLKGPLTMMASHYKQHCPPTPETSCATQIITFESFKENLKDFLLVIPFDCWEPVQE with polyhistidine tag at the N-terminus.
Tag:	His Tag (N-term)
Predicted MW:	The protein has a calculated MW of 15.4 kDa. The protein migrates as 15 kDa under reducing condition (SDS-PAGE analysis).
Purity:	>98% as determined by SDS-PAGE.
Buffer:	The protein was lyophilized from a 0.2 µm filtered solution containing 1X PBS, pH 8.0.
Bioactivity:	Measure by its ability to induce TF-1 cells proliferation. The ED <sub>50</sub> for this effect is <80 pg/mL. The specific activity of recombinant human GM-CSF is approximately >1 x 10 <sup>7</sup> IU/mg.
Endotoxin:	<0.1 EU per 1 µg of the protein by the LAL method.
Reconstitution Method:	Centrifuge at 3000 rpm for 5 mins before opening. It is recommended to reconstitute the lyophilized protein in sterile H <sub>2</sub> O to a concentration not less than 100 µg/mL and incubate the stock solution at room temperature for at least 20 mins to ensure sufficient re-dissolved. Do Not Vortex! Vigorous shaking may impair the biological activity of the protein.
Applications:	Cell culture
Storage:	Lyophilized protein should be stored at -20°C for 1 year. Upon reconstitution, store at 2°C to 8°C for up to 1 week. Further dilute in a buffer containing a carrier protein or stabilizer (e.g. 0.1% BSA, 10%FBS, 5%HSA or 5% trehalose solution), protein aliquots should be stored at -20°C or -80°C for 3-6 months. Avoid repeated freeze/thaw cycles.
UniProt ID:	<a href="#">P04141</a>
Synonyms:	colony stimulating factor 2, CSF2, CSF


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**Summary:**

Granulocyte-macrophage colony-stimulating factor (GM-CSF) was first identified as a Growth Factors due to its ability to induce proliferation and differentiation of bone marrow progenitors into granulocytes and macrophages. GM-CSF is produced by multiple cell types including activated T cells, B cells, macrophages, endothelial cells and fibroblasts upon receiving immune stimuli. GM-CSF stimulates stem cells to produce granulocytes and monocytes functions as a cytokine.

**Product images:**


SDS- PAGE analysis of recombinant human GM-CSF