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## Product Datasheet

### Human GM-CSF protein, His tag (active), Unconjugated GTX00082-PRO

Article Name	Human GM-CSF protein, His tag (active), Unconjugated
Biozol Catalog Number	GTX00082-PRO
Supplier Catalog Number	GTX00082-pro
Alternative Catalog Number	GTX00082-PRO-10
Manufacturer	GeneTex
Category	Proteine/Peptide
Application	FA
Species Reactivity	Human
Conjugation	Unconjugated
NCBI	<a href="#">1437</a>
UniProt	<a href="#">P04141</a>
Buffer	Reconstitute with 20mM Tris and 150mM NaCl to 0.1-1.0mg/ml. Do not vortex. Lyophilized from 20mM Tris, 150mM NaCl, 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose, ProClin 300.
Expression System	HEK293 cells
Form	Lyophilized powder
Sequence	N-terminal His-Tag, Ala18~Glu144 (NP_000749.2)

## Application Notes

TF-1, the human erythroleukemia cell line, provides a good system for detecting the activity of GM-CSF for it is a cell line of immature erythroid origin that completely depends on interleukin 3 (IL-3) or granulocyte-macrophage colony-stimulating factor (GM-CSF) for long term growth. As reported, GM-CSF was also able to induce differentiation of human monoblastic leukemia cell line U937. TF-1 cells and U937 cells were incubated in the presence of various concentrations of rhGM-CSF, then cells were observed by inverted microscope. Cell proliferation of TF1 cells after incubation with GM-CSF (10 ng/ml) was for 3 days, and for U937 cells incubated with GM-CSF (10 ng/ml) was for 5 days.