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Product Datasheet

Rat GM-CSF protein, His tag, Unconjugated GTX00365-PRO

Article Name	Rat GM-CSF protein, His tag, Unconjugated
Biozol Catalog Number	GTX00365-PRO
Supplier Catalog Number	GTX00365-pro
Alternative Catalog Number	GTX00365-PRO-10
Manufacturer	GeneTex
Category	Proteine/Peptide
Application	FA
Species Reactivity	Rat
Conjugation	Unconjugated
NCBI	116630
UniProt	P48750
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	E. coli
Form	Lyophilized powder
Sequence	N-terminal His-Tag, Ala18~Lys144 (NP_446304.1)

Application Notes

Granulocyte-macrophage colony-stimulating factor (GM-CSF), also known as colony stimulating factor 2 (CSF2), is a monomeric glycoprotein secreted by macrophages, T cells, mast cells, natural killer cells, endothelial cells and fibroblasts that functions as a cytokine. GM-CSF stimulates stem cells to produce granulocytes (neutrophils, eosinophils, and basophils) and monocytes. It 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. GM-CSF signals via signal transducer and activator of transcription, STAT5. In macrophages, it has also been shown to signal via STAT3. Besides, Colony Stimulating Factor 2 Receptor Alpha (CSF2Ra) has been identified as an interactor of GM-CSF, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat GM-CSF and recombinant rat CSF2Ra. Briefly, GM-CSF were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to CSF2Ra-coated microtiter wells and incubated for 2h at 37C. Wells were washed with PBST and incubated for 1h with anti-GM-CSF pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37C. Finally, add 50 µl stop solution to the wells and read at 450nm immediately. The binding activity of GM-CSF and CSF2Ra was in a dose dependent manner.