

Rat GM-CSF protein, His tag

Cat. No. GTX00365-pro

Applications Functional Assay**Species** Rat**Package**

10 µg

Applications

Application Note

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 37°C. 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 37°C. 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.

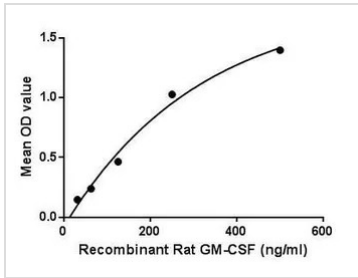
Observed MW (kDa) 45 kDa.

Properties

Form Lyophilized powder**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.**Preservative** ProClin 300**Storage** For short-term storage (1-2 weeks), store at 4°C. For long-term storage, store at -20°C or below. After reconstitution, keep as concentrated solution. Avoid freeze-thaw cycles.**Region/Sequence** N-terminal His-Tag; Ala18~Lys144 (NP_446304.1)**Expression System** E. coli**Purity** > 95%**Endotoxin** < 1 EU/µg**Conjugation** Unconjugated**Note** For laboratory use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.

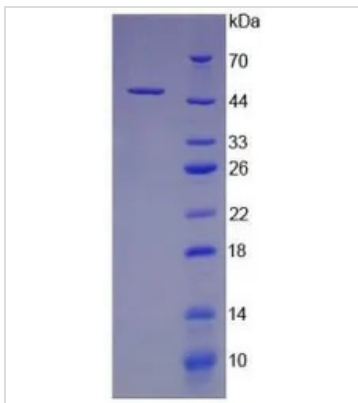
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DATA IMAGES



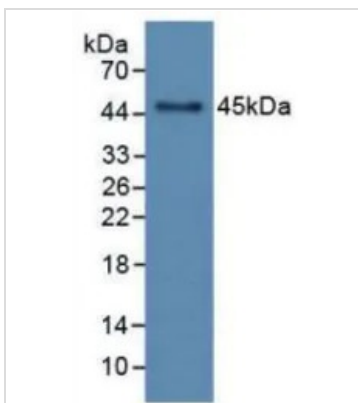
GTX00365-pro Functional Assay Image

Functional ELISA analysis of GTX00365-pro Rat GM-CSF protein which can bind immobilized CSF2Ra protein.



GTX00365-pro Image

SDS-PAGE analysis of GTX00365-pro Rat GM-CSF protein.



GTX00365-pro Image

WB analysis of GTX00365-pro Rat GM-CSF protein.



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