

Mouse GM-CSF ELISA Kit | GM-CSF elisa kit

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CATALOG #
AAA281330

REACTIVITY
Mouse

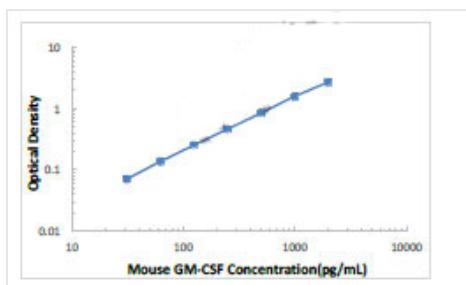
PRODUCT SYNONYMS

GM-CSF; Mouse GM-CSF ELISA Kit; GM-CSF elisa kit

PRODUCT SPECIFICATIONS

Reactivity	Mouse
Specificity	This assay recognizes both recombinant and natural mouse GM-CSF. The factors listed below were prepared at 50ng/ml and assayed for cross-reactivity. No significant cross-reactivity was observed with the following: Recombinant mouse Recombinant human IL-10 G-CSF C10 GM-CSF IL-13 M-CSF G-CSF JE IL-1alpha LIF IL-1beta M-CSF IL-2 MIP-1alpha IL-3 MIP-1beta IL-4 MIP-2 IL-5 SCF IL-6 TNF-alpha IL-7 IL-9
Sequence Length	144
Samples	Cell culture supernates, serum and plasma
Assay Type	Quantitative Sandwich
Sensitivity	< 7.9 pg/mL
Intra-assay Precision	Three samples of known concentration were tested 20 times on one plate to evaluate the Intra-plate precision.
Inter-assay Precision	Three samples of known concentration were tested 20 times separate assays to evaluate the Inter-plate precision. Assay were using two lots of components.
Preparation and Storage	Store at 4 degree C.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for GM-CSF elisa kit	Principle of the Assay: This assay employs the quantitative sandwich enzyme immunoassay technique. A monoclonal antibody specific for GM-CSF has been pre-coated onto a microplate. Standards and samples are pipetted into the wells and any GM-CSF present is bound by the immobilized antibody. Following incubation unbound samples are removed during a wash step, and then a detection antibody specific for GM-CSF is added to the wells and binds to the combination of capture antibody-GM-CSF in sample. Following a wash to remove any unbound combination, and enzyme conjugate is added to the wells. Following incubation and wash steps, a substrate is added. A colored product TMB is formed in proportion to the amount of GM-CSF present in the sample. The reaction is terminated by addition of acid and absorbance is measured. A standard curve is prepared from seven GM-CSF standard dilutions and GM-CSF sample concentration determined. Background/Introduction: Granulocyte-Macrophage Colony Stimulating Factor (GM-CSF), also known as CSF-2, is a pleiotrophic 30 kDa member of the Common beta Chain (betac) cytokine family that also includes IL-3 and IL-5. GM-CSF adopts an alpha-helical configuration with two intrachain disulfide bonds. It is secreted by a wide variety of activated immune, mesenchymal, and epithelial cell types and circulates as a variably glycosylated monomer (1, 2). It is upregulated in multiple cell types during inflammation including encephalitogenic T cells (3-5), allergen exposed lung endothelial cells (6), and IgE activated mast cells (7). Mature mouse GM-CSF shares 54% and 69% amino acid sequence identity with human and rat GM-CSF, respectively (8). Rat GM-CSF is known to be active on mouse cells, while mouse GMCSF has limited activity on rat cells (9). The high-affinity receptor for GM-CSF is composed of a 50 kDa ligand binding alpha subunit (GM-CSF Ralpha) (10) and a 120 kDa signal transducing Common beta Chain (betac) (11, 12). The stoichiometry for the functional GM-CSF receptor is reported to be a 2:2:2 complex of GM-CSF, GM-CSF Ralpha, and betac (13, 14). Notably, the betac subunit is shared by the receptor complexes for IL-3 and IL-5, and IL-5 may signal through GM-CSF Ralpha and betac (14). GM-CSF may additionally utilize Syndecan-2 as a coreceptor (15). A number of functions have been attributed to GM-CSF. It induces monocyte, neutrophil, and eosinophil production from CD34 + stem cell precursors (16, 17). It can act in concert with IL-4 or Flt-3 Ligand to induce the development and maintenance of myeloid and dermal dendritic cells (17-21). It also acts as a neutrophil and dendritic cell chemoattractant (6, 22). GM-CSF promotes Th1 and Th17 cell mediated autoimmune inflammation as well as the inflammatory activation of dendritic cells, microglia, alveolar macrophages, and eosinophils (3-5, 23-27). In addition, it cooperates with G-CSF in promoting tumor cell proliferation and invasion (28).
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NCBI AND UNIPROT INFORMATION

NCBI GI #	183364
NCBI GeneID	1437
Molecular Weight	16,295 Da
NCBI Official Full Name	GM-CSF
NCBI Official Synonym Full Names	colony stimulating factor 2
NCBI Official Symbol	CSF2
NCBI Official Synonym Symbols	CSF; GMCSF
NCBI Protein Information	granulocyte-macrophage colony-stimulating factor
UniProt Protein Name	Granulocyte-macrophage colony-stimulating factor
UniProt Gene Name	CSF2
UniProt Synonym Gene Names	GMCSF; GM-CSF; CSF

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.