Cytokines

Mouse Recombinant MIP-1 alpha (CCL3)

Macrophage inflammatory protein-1 alpha

Catalog #	78089	10 µg
	78089.1	100 µg

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Product Description

Macrophage inflammatory protein-1 alpha (MIP-1 alpha), also known as CCL3, is a member of the CC family of chemokines and is most closely related to CCL4 or MIP-1 beta. Mouse MIP-1 alpha signals through CCR1, CCR3, CCR5, and D6 receptors (Menten et al.). MIP-1 alpha exhibits a variety of proinflammatory activities in vitro, including leukocyte chemotaxis, cytokine production, and mast cell activation, and it inhibits the proliferation of hematopoietic stem cells in vitro and in vivo (Cook). MIP-1 alpha plays a critical role in macrophage recruitment into wounds and in tissue repair (DiPietro et al.). It has been demonstrated that blockade of the CCL3/MIP-1 alpha-CCR1 pathway blocks the recruitment of CCR1-expressing CD4+ T cells to the liver, showing a therapeutic potential for treating T cell-mediated liver diseases (Ajuebor et al.).

Product Information

Alternative Names:	AI323804, G0S19-1, LD78α, MIP-1a, SCYA3
Accession Number:	Q5QNW0
Amino Acid Sequence:	APYGADTPTA CCFSYSRKIP RQFIVDYFET SSLCSQPGVI FLTKRNRQIC ADSKETWVQE YITDLELNA
Predicted Molecular Mass:	7.9 kDa
Species:	Mouse
Cross Reactivity:	Human, Rat
Formulation:	Lyophilized from a sterile-filtered aqueous solution containing 0.1% trifluoroacetic acid.
Source:	E. coli

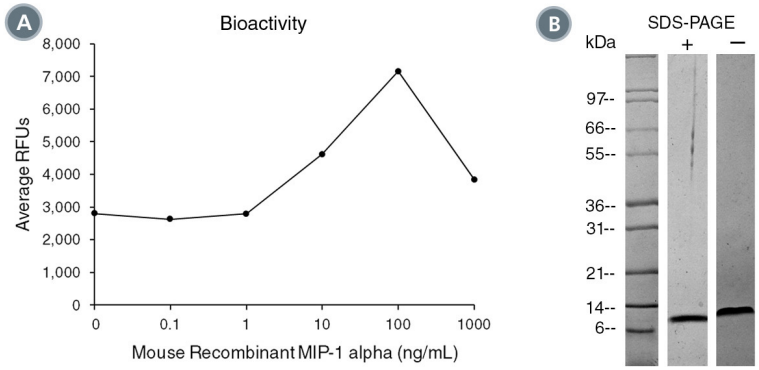
Specifications

Activity:	Biological activity was detectable at ≤ 100 ng/mL as determined by a cell migration assay using THP-1 cells.
Purity:	≥ 95%
Endotoxin Level:	Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 1 EU/µg protein.

Preparation and Storage

Storage:	Store at -20°C to -80°C.
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. OPTIONAL: After reconstitution, if product will not be used immediately, dilute with concentrated bovine serum albumin (BSA) to a final BSA concentration of 0.1%. The effect of storage of stock solution on product performance should be tested for each application. As a general guide, do not store at 2 - 8°C for more than 1 month or at -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Mouse Recombinant MIP-1 alpha (CCL3) was tested by its ability to induce chemotaxis of THP-1 cells. Cell migration was measured after 1 hour using a fluorometric assay method. Increase in migration over basal level was seen starting at 10 ng/mL.
(B) 1 µg of Mouse Recombinant MIP-1 alpha (CCL3) was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Mouse Recombinant MIP-1 alpha (CCL3) has a predicted molecular mass of 7.9 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References

Ajuebor MN et al. (2004) CCL3/MIP-1alpha is pro-inflammatory in murine T cell-mediated hepatitis by recruiting CCR1-expressing CD4(+) T cells to the liver. Eur J Immunol 34(10): 2907–18.
Cook DN. (1996) The role of MIP-1 alpha in inflammation and hematopoiesis. J Leukoc Biol 59(1): 61–6.
DiPietro LA et al. (1998) MIP-1alpha as a critical macrophage chemoattractant in murine wound repair. J Clin Invest 101(8): 1693–8.
Menten P et al. (2002) Macrophage inflammatory protein-1. Cytokine Growth Factor Rev 13(6): 455–81.