Cytokines

Mouse Recombinant RANTES (CCL5)

Regulated upon activation, normal T cell expressed and secreted

Catalog #	78100	20 µg
	78100.1	100 µg

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Product Description

RANTES (regulated upon activation, normal T cell expressed and secreted), also known as CCL5, is a member of the CC family of chemokines and is able to recruit leukocytes to sites of inflammation (Schall et al.). RANTES is secreted by T lymphocytes, macrophages, platelets, synovial fibroblasts, tubular epithelium, and certain types of tumor cells (Aldinucci & Colombatti; Soria & Ben-Baruch). This chemokine exerts its effect by interacting with the chemokine receptors CCR1, CCR3, CCR4, and CCR5. RANTES plays an active role in recruiting a variety of leukocytes into inflammatory sites, including T cells, macrophages, eosinophils, and basophils. In collaboration with certain cytokines that are released by T cells such as IL-2 and IFN-γ, RANTES also induces the activation and proliferation of NK cells to generate CC chemokine-activated killer cells, which are highly cytolytic (Lv et al.; Maghazachi et al.). It has been shown that RANTES produced by CD8+ T cells inhibits HIV infection of primary human peripheral blood mononuclear cells (Appay & Rowland-Jones; Cocchi et al.).

Product Information

Alternative Names:	D17S136, Eosinophil chemotactic cytokine, Regulated upon activation normally T-expressed and secreted, SIS-delta, Small-inducible cytokine A5, T-cell specific protein p288
Accession Number:	Q5XZF2
Amino Acid Sequence:	SPYGSDTTPC CFAYLSLALP RAHVKEYFYT SSKCSNLAVV FVTRRNRQVC ANPEKKWVQE YINYLEMS
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

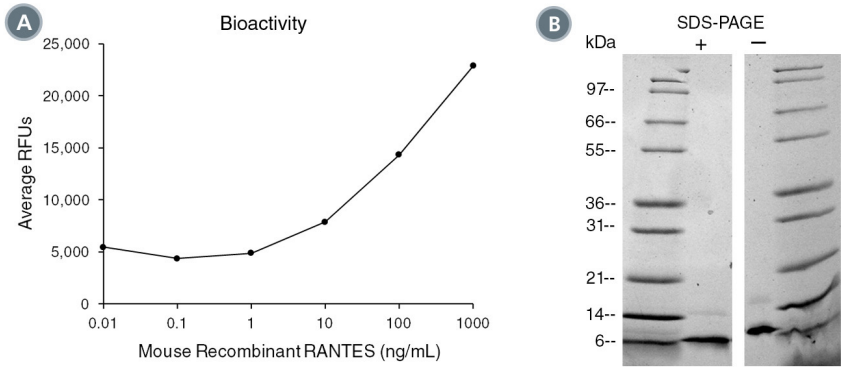
Specifications

Activity:	Biological activity was detectable at ≤ 250 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 RANTES (CCL5) was tested by its ability to induce chemotaxis of THP-1 cells. Cell migration was measured after 45 minutes using a fluorometric assay method. Increase in migration over basal level was seen starting at 10 ng/mL.
(B) 1 µg of Mouse Recombinant RANTES (CCL5) was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Mouse Recombinant RANTES (CCL5) 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

Aldinucci D & Colombatti A. (2014) The inflammatory chemokine CCL5 and cancer progression. Mediators Inflamm 2014: 292376.
Appay V & Rowland-Jones SL. (2001) RANTES: a versatile and controversial chemokine. Trends Immunol 22(2): 83–7.
Cocchi F et al. (1995) Identification of RANTES, MIP-1 alpha, and MIP-1 beta as the major HIV-suppressive factors produced by CD8+ T cells. Science 270(5243): 1811–5.
Lv D et al. (2013) CCL5 as a potential immunotherapeutic target in triple-negative breast cancer. Cell Mol Immunol 10(4): 303–10.
Maghazachi AA et al. (1996) CC chemokines induce the generation of killer cells from CD56+ cells. Eur J Immunol 26(2): 315–9.
Schall TJ et al. (1988) A human T cell-specific molecule is a member of a new gene family. J Immunol 141(3): 1018–25.
Soria G & Ben-Baruch A. (2008) The inflammatory chemokines CCL2 and CCL5 in breast cancer. Cancer Lett 267(2): 271–85.