

RANTES/CCL5

Catalog # PVGS1411

Specification

RANTES/CCL5 - Product Information

Primary Accession Species Human <u>P13501</u>

Sequence Ser24-Ser91

Purity > 98% as analyzed by SDS-PAGE

Endotoxin Level < 0.2 EU/ μg of protein by gel clotting method

Biological Activity

The EC₅₀ value of human RANTES/CCL5 on Ca²⁺ mobilization assay in CHO-K1/G α 15/hCCR1 cells (human G α 15 and human CCR1 stably expressed in CHO-K1 cells) is less than 0.2 µg/ml.

Expression System HEK 293

Formulation

Reconstitution

Lyophilized after extensive dialysis against PBS.

It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH_2O or PBS up to 100 µg/ml.

Storage & Stability

Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

RANTES/CCL5 - Additional Information

Gene ID 6352

Other Names

C-C motif chemokine 5, EoCP, Eosinophil chemotactic cytokine, SIS-delta, Small-inducible cytokine A5, T cell-specific protein P228, TCP228, T-cell-specific protein RANTES, RANTES(3-68), RANTES(4-68), CCL5, D17S136E, SCYA5

Target Background

Chemokine (C-C motif) ligand 5(CCL5), also known as RANTES (Regulated upon activation, Normal



T cell Expressed and presumable Secreted) is a CC-chemokine that can signal through the CCR1, CCR3, CCR5 and US28 (cytomegalovirus receptor) receptors. RANTES is chemotactic for T cells, eosinophils, and basophils, and plays an active role in recruiting leukocytes in inflammatory sites. With the help of specific cytokines (i.e., IL-2 and IFN- γ) that are released by T cells, RANTES induces the proliferation and activation of certain natural-killer (NK) cells to form CHAK (CC-Chemokine-activated killer) cells. RANTES is also an HIV-suppressive factor released from CD8⁺ T cells. This chemokine has been localized to chromosome 17 in humans. It has the capability to inhibit certain strains of HIV-1, HIV-2 and simian immunodeficiency virus (SIV).

RANTES/CCL5 - Protein Information

Name CCL5

Synonyms D17S136E, SCYA5

Function

Chemoattractant for blood monocytes, memory T-helper cells and eosinophils. Causes the release of histamine from basophils and activates eosinophils. May activate several chemokine receptors including CCR1, CCR3, CCR4 and CCR5. One of the major HIV-suppressive factors produced by CD8+ T-cells. Recombinant RANTES protein induces a dose-dependent inhibition of different strains of HIV-1, HIV-2, and simian immunodeficiency virus (SIV). The processed form RANTES(3-68) acts as a natural chemotaxis inhibitor and is a more potent inhibitor of HIV-1-infection. The second processed form RANTES(4-68) exhibits reduced chemotactic and HIV-suppressive activity compared with RANTES(1-68) and RANTES(3-68) (PubMed:1380064, PubMed:15923218, PubMed:16791620, PubMed:8525373, PubMed:9516414). May also be an agonist of the G protein-coupled receptor GPR75, stimulating inositol trisphosphate production and calcium mobilization through its activation. Together with GPR75, may play a role in neuron survival through activation of a downstream signaling pathway involving the PI3, Akt and MAP kinases. By activating GPR75 may also play a role in insulin secretion by islet cells (PubMed:23979485).

Cellular Location Secreted.

Tissue Location Expressed in the follicular fluid (at protein level). T-cell and macrophage specific.

RANTES/CCL5 - Protocols

Provided below are standard protocols that you may find useful for product applications.

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety



• <u>Cell Culture</u> RANTES/CCL5 - Images