

RANTES/CCL5
Catalog # PVGS1411**Specification**

RANTES/CCL5 - Product Information

Primary Accession [P13501](#)
Species
Human

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/Gα15/hCCR1 cells (human Gα15 and human CCR1 stably expressed in CHO-K1 cells) is less than 0.2 µg/ml.

Expression System
HEK 293

Formulation **Lyophilized after extensive dialysis against PBS.**

Reconstitution
It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH₂O 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.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)

- [Cell Culture](#)

RANTES/CCL5 - Images