



# Recombinant Protein Technical Manual

## Recombinant Rat CCL5/RANTES Protein (His Tag)

RPES0340

### Product Data:

**Product SKU:** RPES0340

**Size:** 10µg

**Species:** Rat

**Expression host:** E. coli

**Uniprot:** P50231

### Protein Information:

**Molecular Mass:** 10 kDa

**AP Molecular Mass:** 13 kDa

**Tag:** N-6His

**Bio-activity:**

**Purity:** > 95 % as determined by SDS-PAGE

**Endotoxin:** < 1.0 EU per µg as determined by LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from a 0.2 µm filtered solution of 20mM PB, 500mM NaCl, 2mM EDTA, pH7.4

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** C-C motif chemokine 5; SIS-delta; Small-inducible cytokine A5; T-cell-specific protein RANTES; Ccl5; Scya5

## Immunogen Information:

**Sequence:** Ser25-Ser92

## Background:

C-C motif chemokine 5 (CCL5) is a  $\beta$ -chemokine that plays a primary role in the inflammatory immune response by means of its ability to attract and activate leukocytes. CCL5 is secreted by many cell types at inflammatory sites, and it exerts a wide range of activities through the receptors CCR1, CCR3, CCR4, and CCR5. Inflammatory responses can be impaired by the sequestration of CCL5 by the cytomegalovirus protein US28. Oligomerization of CCL5 on glycosaminoglycans is required for CCR1-mediated leukocyte adhesion and activation as well as CCL5's interaction with the chemokine CXCL4/PF4. The deposition of CCL5 on activated vascular endothelial cells is crucial for monocyte adhesion to damaged vasculature, but CCL5 oligomerization is not required for the extravasation of adherent leukocytes. CCL5 is upregulated in breast cancer and promotes tumor progression through the attraction of proinflammatory macrophages in addition to its actions on tumor cells, stromal cells, and the vasculature.