

Recombinant Canine CCL5 Protein

Cat. No. CCL5-424C **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Canine CCL5 Protein was expressed in E. coli.
Species	Canine
Source	E.coli
ProteinLength	Ser24-Ser91
Description	CCL5, also known as RANTES (Regulated upon Activation, Normal T cell Expressed and presumably Secreted), is an 8 kDa beta -chemokine that plays a primary role in the inflammatory immune response by means of its ability to attract and activate leukocytes. Human and mouse RANTES exhibit cross-species activity on human and mouse cells. Mature canine CCL5 shares 74% - 84% amino acid sequence identity with cotton rat, feline, human, mouse, and rat CCL5. 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. In humans, CCR5 binding to CCL5 inhibits the infectivity of R5 (M-tropic) but not X4 (T-tropic) strains of HIV-1. The two N-terminal residues of CCL5 can be removed by CD26/DPPIV, generating a protein that functions as a chemotaxis inhibitor and more effectively blocks M-tropic HIV-1 infection of monocytes. 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

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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.

Form	Lyophilized from a 0.2 µm filtered solution in Acetonitrile and TFA with BSA as a carrier protein.
Bio-activity	Measured by its ability to chemoattract BaF3 mouse pro-B cells transfected with human CCR5. The ED50 for this effect is 2-10 ng/mL.
Molecular Mass	Predicted Molecular Mass: 7.9 kDa SDS-PAGE: 7.9 kDa, reducing conditions
Endotoxin	<0.01 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Reconstitution	Reconstitute at 100 µg/mL in PBS containing at least 0.1% human or bovine serum albumin.

GENE INFORMATION

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Gene Name	CCL5 C-C motif chemokine ligand 5 [<i>Canis lupus familiaris</i> (dog)]
Official Symbol	CCL5
Synonyms	CCL5; C-C motif chemokine ligand 5; chemokine (C-C motif) ligand 5; D17S136E normally T-expressed, and presumably secreted; EoCP; Eosinophil chemotactic cytokine; RANTES; SISd; SIS-delta; small inducible cytokine A5 (RANTES); small inducible cytokine subfamily A (Cys-Cys), member 5; Small-inducible cytokine A5; T cell-specific protein P228; T-cell specific protein p288; TCP228T-cell-specific protein RANTES
Gene ID	403522
mRNA Refseq	NM_001003010.2
Protein Refseq	NP_001003010.1
UniProt ID	Q8HYS0

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