

Recombinant Rat CCL5 (RANTES) (carrier-free)

Catalog# / Size	763902 / 10 µg 763904 / 25 µg 763906 / 100 µg
Regulatory Status	RUO
Other Names	RANTES, Scya5
Description	CCL5 is a chemokine originally identified as a T-cell-specific gene. It directs the migration of leukocytes in immune and inflammatory responses. Increased CCL5 expression is associated with a wide range of inflammatory disorders and pathologies. This cytokine is linked as well with the induction or promotion of cancer (prostate and breast). In the latter situation, CCL5 can be angiogenic and also increase the metastatic potential of cancer cells by encouraging cellular migration to sites of its production. CCL5 also inhibits HIV-1 entry and infection by competing with the virus for CCR5 binding. Also, CCL5 participates in CNS homeostasis, brain inflammation, and ocular, and neurodegenerative diseases. Elevated plasma CCL5 and CCL2 were observed in autism spectrum disorder. Also, CCL5 and its receptors CCR1, CCR3 and CCR5 have also been observed in different pain models. CCL5 is expressed during spinal glial cell activation in a neuropathic pain model induced by chronic constriction injury surgery.

Product Details

Molecular Mass	The 68 amino acid recombinant protein has a predicted molecular mass of approximately 7.8 kD. The DTT-reduced protein migrates at approximately 10 kD and the non-reduced protein migrates at approximately 12 kD by SDS-PAGE. The N-terminal amino acid is Serine.
Purity	>95% as determined by Coomassie stained SDS-PAGE.
Formulation	0.22 µm filtered protein solution in 0.15 M NaCl, 0.1 M glycine pH 3.0.
Endotoxin Level	Less than 0.01 ng/per µg cytokine (0.1 EU/µg) as determined by the LAL method.
Concentration	10 and 25 µg sizes are bottled at 200 µg/mL. 100 µg size and larger sizes are lot-specific and bottled at the concentration indicated on the vial. To obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.
Storage & Handling	Unopened vial can be stored between 2°C and 8°C for up to 2 weeks, at -20°C for up to six months, or at -70°C or colder until the expiration date. For maximum results, quick spin vial prior to opening. The protein can be aliquoted and stored at -20°C or colder. Stock solutions can also be prepared at 50 - 100 µg/mL in appropriate sterile buffer, carrier protein such as 0.2 - 1% BSA or HSA can be added when preparing the stock solution. Aliquots can be stored between 2°C and 8°C for up to one week and stored at -20°C or colder for up to 3 months. Avoid repeated freeze/thaw cycles.
Activity	Bioactivity was measured by its property to chemoattract Baf3-hCCR5 transfectants in a dose dependent manner. The ED ₅₀ is 0.6 - 3 ng/ml.
Application	Bioassay
Application Notes	BioLegend carrier-free recombinant proteins provided in liquid format are shipped on blue-ice. Our comparison testing data indicates that when handled and stored as recommended, the liquid format has equal or better stability and shelf-life compared to commercially available lyophilized proteins after reconstitution. Our liquid proteins are verified in-house to maintain activity after shipping on blue ice and are backed by our 100% satisfaction guarantee . If you have any concerns, contact us at tech@biolegend.com .

Antigen Details

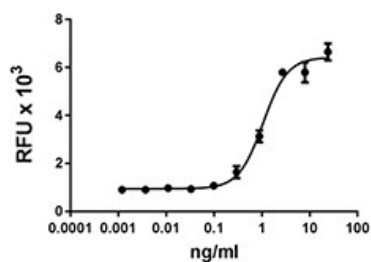
Structure	Chemokine
Distribution	Secreted by lymphocytes, macrophages, eosinophils, platelets, fibroblasts, microglia, astrocytes,

and neurons. Expressed by hepatocytes, sinusoidal endothelial cells and biliary epithelium during chronic hepatitis C.

Function	CCL5 modulates the LPS-induced IL-6 and TNF α in peripheral blood monocytes; this modulation is through the induction of IL-10 by CCL5.
Interaction	CCL5 is chemoattractant for memory and activated T cells, monocytes, dendritic cells, eosinophils, NK cells, mast cells, and basophils.
Ligand/Receptor	CCL5 binds to CCR1, CCR3, CCR5, and GPR75 receptors. In addition CCL5 binds to CCR9; nevertheless, it does not induce calcium flux and therefore no chemotactic response.
Bioactivity	Rat CCL5 chemoattracts CCR5 expressing cells.
Biology Area	Cell Biology, Immunology, Innate Immunity, Neuroinflammation, Neuroscience
Molecular Family	Cytokines/Chemokines
Antigen References	<ol style="list-style-type: none">1. Schall, <i>et al.</i> 1990. <i>Nature</i> 347:669.2. Cocchi F, <i>et al.</i> 1995. <i>Science</i> 270:1811.3. Shahrara S, <i>et al.</i> 2006. <i>J. Immunology</i> 177:5077.4. Ignatov A, <i>et al.</i>, 2006. <i>Br J Pharmacol.</i> 149:490.5. Larrubia JR, <i>et al.</i> 2008. <i>World J. Gastroenterol</i> 14:7149.6. Gleissner CA, <i>et al.</i> 2008. <i>Arterioscler Thromb. Vasc. Biol.</i> 28:1920.7. Yin Q, <i>et al.</i> 2015. <i>PLoS One.</i> 10:e0115120.8. Han YM, <i>et al.</i> 2017. <i>Front Immunol.</i> 8:11.

Gene ID [81780](#)

Product Data



Rat CCL5 chemoattracts Baf3-hCCR5 transfectants in a dose dependent manner.

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