

Recombinant Mouse CXCL2 (MIP-2) (carrier-free)

Catalog# / Size	582502 / 10 µg 582504 / 25 µg 582506 / 100 µg
Regulatory Status	RUO
Other Names	Gro2 oncogene, Groβ
Description	<p>CXCL2 is an ELR CXC chemokine, and it is structurally and functionally related to GRO1 (CXCL1), GRO3 (CXCL3), and interleukin-8 (CXCL8). CXCL2 binds to the CXCR2 receptor, and this receptor is shared with other ELR CXC chemokines (CXCL1, CXCL3, CXCL5, CXCL6, CXCL7, and CXCL8). CXCL2 is highly expressed in esophageal squamous cell carcinoma (ESCC), and it has been detected in serum of patients with this disease. Also, CXCL1, CXCL2, and CXCL3 have been shown to be highly expressed in patients with malignant melanoma. In addition, CXCL2 and CXCL1 are up-regulated in the central nervous system in multiple sclerosis (MS) and in the animal model of experimental autoimmune encephalomyelitis (EAE). In EAE, it has been shown that transfer of encephalitogenic CD4⁺ Th17 cells induce CXCL1 and CXCL2 transcription in the spinal cords of naïve, syngeneic recipients. IL-17 is a potent inducer of ELR⁺ CXC chemokines in MS and EAE. In fact, it has been showed that CXCL1 and CXCL2 are up-regulated in the preclinical and clinical stages of EAE. In addition, it has been shown that CXCL1 and CXCL2 are secreted by epithelial cells in bone marrow, and CXCL2 is secreted by endothelial cells during G-CSF-induced neutrophil mobilization.</p>

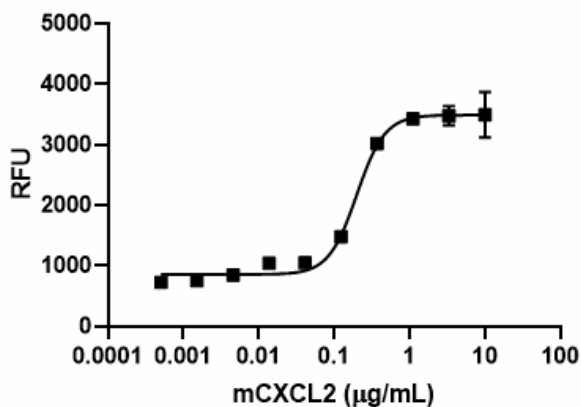
Product Details

Source	Mouse CXCL2, amino acids Ala28-Asn100 (Accession# NM_009140.2) was expressed in <i>E. coli</i> .
Molecular Mass	The 73 amino acid recombinant protein has a predicted molecular mass of approximately 7.8 kD. The DTT-reduced protein migrates at approximately 10 kD and non-reduced protein migrates at 12 kD by SDS-PAGE. The N-terminal amino acid is Alanine.
Purity	>98%, as determined by Coomassie stained SDS-PAGE.
Formulation	0.22 µm filtered protein solution is in PBS.
Endotoxin Level	Less than 0.01 ng per µg cytokine 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 human neutrophils in a dose dependent manner. Recombinant Mouse CXCL2 chemoattracts Baf3-mCXCR2 transfectant cells in a dose-dependent manner with ED ₅₀ range of 0.1-0.5 µg/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 .
Product Citations	1. Abe H, <i>et al.</i> 2019. Nat Commun. 10:2824. PubMed

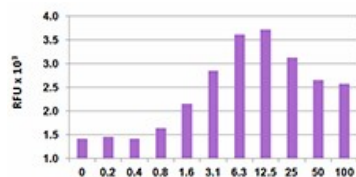
Antigen Details

Structure	Chemokine.
Distribution	Macrophages, monocytes, fibroblasts, intestinal enterocytes, bone marrow endothelial cells, osteoblasts, and epithelial cells.
Function	CXCL2 chemoattracts and activates neutrophils, and it plays a key role in neutrophil mobilization from the bone marrow. CXCL2 is induced by TNF α , IL-1 α , IL-17, and LPS.
Interaction	Neutrophils, basophils, lymphocytes, monocytes, keratinocytes, hematopoietic cells, endothelial cells, bone marrow endothelial cells, osteoblasts, epithelial cells, fibroblasts, melanoma cells, melanocytes, and neurons.
Ligand/Receptor	CXCR2.
Biology Area	Cell Biology, Signal Transduction
Molecular Family	Cytokines/Chemokines
Antigen References	<ol style="list-style-type: none">1. Haskill S, <i>et al.</i> 1990. <i>P. Natl. Acad. Sci. USA</i> 87:7732.2. De Plaen I, <i>et al.</i> 2006. <i>Immunology</i> 118:153.3. Carlson T, <i>et al.</i> 2008. <i>J. Exp. Med.</i> 205:811.4. Eash KJ, <i>et al.</i> 2010. <i>J. Clin. Invest.</i> 120:2423.5. Keeley EC, <i>et al.</i> 2011. <i>Exp. Cell. Res.</i> 317:685.6. Onishi RM and Gaffen SL. 2011. <i>Immunology</i> 129:311.
Gene ID	20310

Product Data



Recombinant Mouse CXCL2 chemoattracts Baf3-mCXCR2 transfectant cells in a dose-dependent manner with ED₅₀ range of 0.1-0.5 $\mu\text{g/mL}$.



Human neutrophils chemoattracted by mouse CXCL2.

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