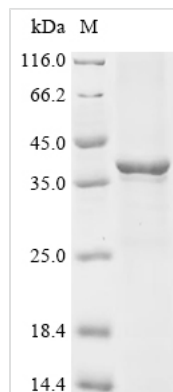




Recombinant Rat Chemokine (C-X-C motif) ligand 13 (Cxcl13), partial

Product Code	CSB-EP006243RA
Abbreviation	Recombinant Rat Cxcl13 protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	Q5I0J6
Form	Liquid or Lyophilized powder
Storage Buffer	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose.
Product Type	Recombinant Rat Chemokine (C-X-C motif) ligand 13(Cxcl13),partial
Immunogen Species	Rattus norvegicus (Rat)
Sensitivity	Not Test
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	LETHYTNLKCRC SKVSSTFINLILVDWIQVIRPGNGCPKTEIIFWTKAKKAICVNP TARWLPKVLK FVRRSITSTPQAPVSKKRAA
Research Area	Immunology
Source	E.coli
Target Names	Cxcl13
Expression Region	23-108aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-GST-tagged
Mol. Weight	41.3
Protein Length	Partial
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The production of recombinant rat Cxcl13 in *E. coli* begins with co-cloning the target gene into an expression vector with an N-terminal 6xHis-GST-tag gene, followed by transformation into *E. coli* cells. These cells are grown under conditions that promote protein expression. Once adequate growth is achieved, the cells are lysed to release the recombinant Cxcl13 protein. Purification involves the affinity chromatography technique. The purity of the recombinant Cxcl13 protein is assessed using SDS-PAGE, reaching over 85%.

Rat Cxcl13 is a chemokine that plays a crucial role in various physiological and pathological processes. Studies have shown that CXCL13 is involved in promoting chronic postsurgical pain and astrocyte activation in rats by targeting NLRP3 [1]. Evidence indicated that inhibiting CXCL13 expression can improve neuropathic pain by modulating the expression of chemokines and inflammatory factors in the spinal cord and interfering with glial cell polarization [2].

Furthermore, CXCL13 is associated with bone marrow mesenchymal stem cell (BMSC) function. It has been demonstrated that CXCL13 can promote osteogenic differentiation of BMSCs by inhibiting miR-23a expression [3]. Research has revealed that CXCL13 enhances the effect of BMSCs on tendon bone healing in rats [4].

In the context of cancer-induced bone pain, CXCL13 attenuates morphine analgesia in rats with cancer-induced bone pain, suggesting a role in pain modulation [5]. Additionally, CXCL13 has been linked to morphine analgesia regulation in bone cancer pain rats through specific signaling pathways [6].

References:

- [1] H. Yi, Cxcl13/cxcr5 promote chronic postsurgical pain and astrocyte activation in rats by targeting nlrp3, *Neuroreport*, vol. 35, no. 6, p. 406-412, 2024. <https://doi.org/10.1097/wnr.0000000000002023>
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- [3] F. Tian, X. Ji, W. Xiao, B. Wang, & F. Wang, Cxcl13 promotes osteogenic differentiation of mesenchymal stem cells by inhibiting mir-23a expression, *Stem Cells International*, vol. 2015, p. 1-8, 2015. <https://doi.org/10.1155/2015/632305>



- [4] F. Tian, X. Ji, W. Xiao, B. Wang, & F. Wang, Cxcl13 promotes the effect of bone marrow mesenchymal stem cells (mscs) on tendon-bone healing in rats and in c3h10t1/2 cells, International Journal of Molecular Sciences, vol. 16, no. 2, p. 3178-3187, 2015. <https://doi.org/10.3390/ijms16023178>
- [5] S. Wang, C. Dong, X. Yang, & J. Yin, Upregulation of (c-x-c motif) ligand 13 (cxcl13) attenuates morphine analgesia in rats with cancer-induced bone pain, Medical Science Monitor, vol. 22, p. 4612-4622, 2016. <https://doi.org/10.12659/msm.897702>
- [6] H. Bu, P. Jiao, X. Fan, Y. Gao, L. Zhang, & H. Guo, The role of botulinum toxin type a related axon transport in neuropathic pain induced by chronic constriction injury, The Korean Journal of Pain, vol. 35, no. 4, p. 391-402, 2022. <https://doi.org/10.3344/kjp.2022.35.4.391>

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.