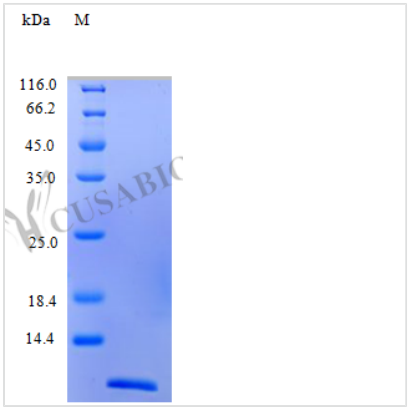
Recombinant Human C-C motif chemokine 2 protein (CCL2) (Active)

Product Code	CSB-AP000821HU
Abbreviation	Recombinant Human CCL2 protein (Active)
Uniprot No.	P13500
Form	Lyophilized powder
Storage Buffer	Lyophilized from a 0.2 μm filtered PBS, pH 7.4
Product Type	Chemokine
Immunogen Species	Homo sapiens (Human)
Biological Activity	Fully biologically active when compared to standard. The biological activity determined by a chemotaxis bioassay using human monocytes is in a concentration range of 10-100 ng/ml.
Purity	>96% as determined by SDS-PAGE.
Sequence	QPDAINAPVT CCYNFTNRKI SVQRLASYRR ITSSKCPKEA VIFKTIVAKE ICADPKQKWV QDSMDHLDKQ TQTPKT
Research Area	Immunology
Source	E.coli
Target Names	CCL2
Expression Region	24-99aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	Tag-Free
Mol. Weight	8.7 kDa
Protein Length	Full Length of Mature Protein
PubMed ID	2923622; 2513477; 2465924; 2518726; 2357211; 1661560; 8107690; 10918580; 14702039; 15489334; 2648385; 2322286; 2071154; 8195247; 8627182; 8898111; 9792674; 9837883; 10587439; 10529171; 15033992; 23233732; 1857712; 8639605; 8989326; 16352737

Image



Description

The Recombinant Human CCL2 protein is a vital research tool for investigators in the field of immunology. This C-C motif chemokine 2, also referred to as CCL2, MCP1, and SCYA2, is produced in E. coli and spans the 24-99aa expression region, representing the full-length mature protein. The tag-free protein is provided as a lyophilized powder, facilitating straightforward reconstitution using sterile water or a suitable buffer to cater to diverse experimental requirements.

Our Recombinant Human CCL2 protein showcases a high level of purity, surpassing 96%, as confirmed by both SDS-PAGE and HPLC assessments. Endotoxin levels are stringently controlled to remain below 1.0 EU/μg, as verified using the LAL method. This protein is fully biologically active, as illustrated by its effectiveness in a chemotaxis bioassay with human monocytes, exhibiting a functional concentration range of 10-100 ng/ml.

The CCL2 chemokine has been widely studied in scientific research. Matsushima and Oppenheim (1989)[1] first reported the identification and purification of the monocyte chemotactic and activating factor, later known as CCL2. In 2013, Deshmane *et al*.[2] provided a comprehensive review of the multifaceted roles of CCL2 in inflammation and disease pathogenesis, including its implications in cancer progression. More recently, Yang *et al*. (2018)[3] highlighted the potential use of CCL2 as a diagnostic biomarker for rheumatoid arthritis. These studies emphasize the significance of CCL2 in immune system function and suggest its possible therapeutic value in treating various immune-related diseases.

References:
1. Matsushima K, Oppenheim JJ. Interleukin 8 and MCAF: novel inflammatory cytokines inducible by IL 1 and TNF. Cytokine. 1989;1(1):2-13.
2. Deshmane SL, *et al*. Monocyte Chemoattractant Protein-1 (MCP-1): An Overview. J Interferon Cytokine Res. 2009;29(6):313-26.
3. Yang M, *et al*. The diagnostic value of serum CCL2/MCP-1 levels in patients with rheumatoid arthritis. Ann Palliat Med. 2018;7(3):312-8.

Endotoxin

Less than 1.0 EU/μg as determined by LAL method.

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.