3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

SILu™Lite CCL2, C-C motif chemokine 2, human recombinant, expressed in HEK cells
MS Protein Standard

Catalog Number **MSST0036**
Storage Temperature –20 °C

Synonyms: HC11, Monocyte chemoattractant protein 1, Monocyte chemotactic and activating factor (MCAF), Monocyte chemotactic protein 1(MCP-1), Monocyte secretory protein JE, Small-inducible cytokine A2

Product Description

SILu™Lite CCL2 is a recombinant human protein expressed in human 293 cells. It is a homodimer consisting of 96 amino acids (including C-terminal polyhistidine and FLAG® tags), with a calculated molecular mass of 11.1 kDa. SILu™Lite CCL2 is an analytical standard designed to be used as starting material for preparation of calibrators and controls in LC-MS applications.

CCL2, the most thoroughly characterized CC chemokine, is a monocyte-specific chemoattractant that was demonstrated to attract T lymphocytes and NK cells, but not neutrophils.[1] Enhanced expression of CCL2 was demonstrated in a variety of pathologic conditions, associated with inflammation and mononuclear cell infiltration.[1] Extensive experimental evidence suggests CCL2 is highly expressed in atherosclerotic plaques.[2] In a recent study, CCL2 was shown to have value as a biomarker for risk stratification in both the initial and the chronic phases after an acute coronary syndrome (ACS). In contrast to CRP, CCL2 levels may be an indicator of long-term cardiovascular risk rather than a marker of acute prognosis.[1] In urine, CCL2 levels were directly associated to Systemic Lupus Erythematosus disease activity, making it a non-invasive biomarker (avoiding blood sampling or tissue biopsies).[3]

Each vial contains 50–65 μg of SILu™Lite CCL2 standard, lyophilized from a solution of phosphate buffered saline. Vial content was determined by the Bradford method using BSA as a calibrator. The correction factor from the Bradford method to Amino Acid Analysis is 60% for this protein.

Identity: Confirmed by peptide mapping

Purity: ≥95% (SDS-PAGE)

UniProt: P13500

Sequence Information
The C-terminal polyhistidine and FLAG tags are italicized.

QPDAINAPVTCCYNFTNRKISVQRLASYRRITSSKCPK
EAVIFKTIVAKEICADPKQKWVQDSMDHLDKQTQTPK
T*DYKDDDDKGHHHHHHHHGGQ*

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein in sterile ultrapure water to a final concentration of 100 μg/mL.

Storage/Stability

Store the lyophilized product at –20 °C. The product is stable for at least 2 years as supplied. After reconstitution, it is recommended to store the protein in working aliquots at –20 °C.

References

1. Gonzalez-Quesada, C., and Frangogiannis, N.G., Monocyte Chemoattractant Protein (MCP-1)/CCL2 as a biomarker in Acute Coronary Syndromes. *Curr. Atheroscler. Rep.,* **11**, 131-138 (2009).
2. Nelken, N.A. et al., Monocyte chemoattractant protein-1 in human atheromatous plaques. *J. Clin. Invest.,* **88**, 1121-1127 (1991).
3. Barbado, J. et al., MCP-1 in urine as biomarker of disease activity in Systemic Lupus Erythematosus, *Cytokine,* **60**, 583-586 (2012).

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