



## LEC/NCC-4 (CCL16), human recombinant (rHuCCL16)

**Catalog No:** 97326  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** C-C motif chemokine 16, Small-inducible cytokine A16, IL-10-inducible chemokine, Chemokine LEC, Monotactin-1, Chemokine CC-4, Lymphocyte and monocyte chemoattractant, CCL-16, HCC-4, HCC4, NCC4, NCC-4, Liver Expressed Chemokine, LMC, LCC-1, LCC1, MTN-1, MTN1, SCYL4, ckB12, SCYA16, LEC, ILINCK, MGC117051

### Background

Human CCL16, also called HCC-4, liver-expressed chemokine (LEC), and lymphocyte and monocyte chemoattractant (LMC), is a novel CC chemokine recognized by bioinformatics. NCC-4 cDNA encodes a 120 amino acids along with a 23 amino acids signal peptide that is cleaved to generate 97 amino acid protein. HCC4 is vaguely related to other CC chemokines, showing less than 30% sequence identity. Among CC chemokines, CCL-16 has the largest similarity to HCC-1. 2 potential polyadenylation signals are present on the human HCC-4 gene, and as a result, 2 transcripts containing roughly 1,500 base pairs and 500 base pairs have been detected. HCC-4 is expressed weakly by some lymphocytes, including NK cells, T cells, and some T cell clones. The expression of HCC-4 in monocytes is greatly upregulated in the presence of IL-10. CCL16 shows chemotactic activity for lymphocytes and monocytes rather than to neutrophils. NCC-4 has potent myelosuppressive activity, suppresses proliferation of myeloid progenitor cells. CCL16 demonstrates chemotactic activity for monocytes and thp-1 monocytes, rather than for resting lymphocytes and neutrophils. HCC-4 induces a calcium flux in thp-1 cells that desensitized prior to the expression of rantes.

### Description

CCL16 human recombinant produced in *E. coli* is a non-glycosylated, polypeptide chain containing 97 amino acids and having a molecular mass of 11.2 kDa. CCL16 is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### Formulation

The CCL16 protein was lyophilized from a concentrated (1 mg/ml) sterile solution containing 20 mM sodium phosphate buffer pH 7.4 and 0.15 M sodium chloride.

### Solubility

It is recommended to reconstitute the lyophilized CCL16 in sterile 18 M $\Omega$ -cm H<sub>2</sub>O not less than 100  $\mu$ g/ml, which can then be further diluted to other aqueous solutions.

### Stability

Lyophilized CCL16, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution CCL16 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Purity

Greater than 97.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

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### Amino Acid Sequence

QPKVPEWVNT PSTCCLKYYE KVLPRRLVVG YRKALNCHLP AIIFVTKRNR EVCTNPNDW VQEYIKDPNL PLLPTRNLST  
VKIITAKNGQ PQLLNSQ

### Activity

Determined by its ability to chemoattract total human monocytes using a concentration range of 10 - 100 ng/ml corresponding to a specific activity of 10,000 - 100,000 IU/mg.

### Usage

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