

Product Information

EOTAXIN-3 (CCL26)
Human, Recombinant
Expressed in *Escherichia coli*

Product Number **E 8399**

Product Description

Recombinant Human Eotaxin-3, also named CCL26 or SCYA26, is a member of the CC chemokine family of cytokines, expressed in *E. coli*. A cDNA sequence encoding the mature human eotaxin-3¹ has a 68 amino acid residue and a predicted molecular mass of approximately 8.2 kDa. Based on N-terminal sequencing, the amino-terminal methionine residue is absent in the mature recombinant human eotaxin-3. Recombinant Human Eotaxin-3 maps to chromosome 7q11.2, within 40 kilobases of the eotaxin-2 loci.^{1,2}

Eotaxin-3 cDNA encodes a 94 amino acid residue precursor protein with a putative signal peptide of either 23 or 26 amino acid residues. Recombinant eotaxin-3 has been produced in insect cells using a baculovirus expression system and shown to contain 71 amino acid residues. Both the 71 amino acid residue and 68 amino acid residue variants of eotaxin-3 have been expressed in *E. coli* and found to have equal potency in inducing chemotaxis of a human CCR3-transfected cell line.

Human Eotaxin-3 is chemotactic for eosinophils and PHA (phytohemagglutinin)-activated T cells. Eotaxin-3 is a ligand for the receptor CCR3 with potency lower than eotaxin.² Eotaxin-3 induces calcium flux in eosinophils as well as in CCR3-transfected cells. It will also cross-desensitize cells to other CCR3 ligands. Human eotaxin-3 preferentially activates eosinophils, suggesting that it play an important role in inflammatory allergic diseases such as asthma and atopic dermatitis.³

Human Eotaxin-3 is constitutively expressed in the heart, ovary, and liver.^{1,2} Low levels of eotaxin-3 can be found in various tissues including skeletal muscle, kidney, and small intestine. Eotaxin-3 expression in vascular endothelial cells is up regulated by IL-13 and IL-4.³

Reagents

Recombinant Human Eotaxin-3 is supplied as an approximately 25 µg of protein lyophilized from a 0.2 µm filtered solution in 30 % acetonitrile, 0.1 %

trifluoroacetic acid containing 1.25 mg bovine serum albumin.

Preparation Instructions

Reconstitute the contents of the vial using sterile phosphate-buffered saline (PBS) containing 0.1 % human serum albumin or bovine serum albumin. Prepare a stock solution of no less than 25 µg/ml.

Storage/Stability

Store at -20 °C. Upon reconstitution, store the product at 2 °C to 8 °C for one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended.

Product Profile

Recombinant Human Eotaxin-3 is measured by its ability to induce chemotaxis of rat Y3 cells stably expressing hCCR3.

The ED₅₀ for this effect is generally 0.25 to 1.0 µg/ml. The ED₅₀ is defined as the effective concentration of growth factor that elicits a 50 % increase in cell growth in a cell based bioassay.

Purity: > 97 % as determined by SDS-PAGE, visualized by silver stain.

Endotoxin: < 0.1 ng/µg of protein determined by the LAL method.

References

1. Guo, R.F., et al., Molecular cloning and characterization of a novel human CC chemokine, SCYA26. *Genomics*, **58**, 313-317 (1999).
2. Kitaura, M., et al., Molecular cloning of human eotaxin, an eosinophil-selective CC chemokine, and identification of a specific eosinophil eotaxin receptor, CC chemokine receptor 3. *J. Biol. Chem.*, **271**, 7725-7730 (1996).
3. Shinkai, a., et al., A novel human CC chemokine, eotaxin-3, which is expressed in IL-4-stimulated vascular endothelial cells, exhibits potent activity toward eosinophils. *J. Immunol.*, **163**, 1602-1610 (1999).

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