



3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

Product Information

TECK, mouse recombinant, expressed in *Escherichia coli*

Catalog Number **T9444**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

Product Description

Mature mouse thymus-expressed chemokine (TECK) protein is expressed in *E. coli*. The 122 amino acid residue methionyl form of recombinant mouse TECK has a predicted molecular mass of ~14 kDa. It migrates as a 16-17 kDa doublet in SDS-PAGE suggesting that some C-terminal truncation may have occurred.

TECK is a novel CC chemokine that is distantly related, ~20 % amino acid sequence identity, to other CC chemokines. Mouse TECK cDNA encodes a 144 amino acid residue precursor protein with a 23 amino acid residue signal peptide that is cleaved to yield a 121 amino acid mature protein. The expression of TECK is highly restricted to the thymus and small intestine. Dendritic cells have been shown to be the source of TECK in the thymus, but bone marrow dendritic cells do not express it. TECK is a chemotactic for activated macrophages, dendritic cells and thymocytes.¹ It is a specific agonist for the CC chemokine receptor 9 (CCR9).² The interplay of TECK and its receptor CCR9 play a role in the recruitment of developing thymocytes to discrete compartments of the thymus.³

Deletion of the CCR9 gene results in mild early impairment of early T- and B-cell development and diminution of the T-cell receptor $\gamma\delta(+)$ compartment.⁴ The CCR9/TECK interaction provides a cell survival signal against C-FLIP(L) and FAS-mediated apoptosis.⁵

Reagent

Supplied lyophilized from a 0.2 μm filtered solution in phosphate buffered saline containing at least 50 μg of bovine serum albumin per 1 μg of cytokine.

Precautions and Disclaimer

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

Preparation Instructions

Stock solutions are prepared at 10 $\mu\text{g}/\text{mL}$ or greater in sterile PBS containing at least 0.1% human serum albumin or bovine serum albumin.

Storage/Stability

Upon receipt store at $-20\text{ }^{\circ}\text{C}$. Upon reconstitution, the sterile solutions may be stored at 2-4 $^{\circ}\text{C}$ for up to one month. For extended use, aliquot and freeze at $-20\text{ }^{\circ}\text{C}$ or below. Avoid repeated freeze-thaw cycles.

Product Profile

The biological activity is measured by inducing chemotaxis of mouse Baf/3 cells transfected with hGPR-9-6 (hCCR9).

Purity: >97% (SDS-PAGE)

References

1. Vicari, A.P. *et al.* TECK: a novel CC chemokine specifically expressed by thymic dendritic cells and potentially involved in T cell development. *Immunity* **7**, 291 - 301 (1997).
2. Zaballos, A., *et al.*, Cutting edge: identification of the orphan chemokine receptor GPR-9-6 as CCR9, the receptor for the chemokine TECK. *J. Immunol.*, **162**, 5671-5675 (1999).
3. Wurbel, M. A., *et al.*, The chemokine TECK is expressed by thymic and intestinal epithelial cells and attracts double- and single-positive thymocytes expressing the TECK receptor CCR9. *Eur. J. Immunol.*, **30**, 262-271 (2000).

4. Wurbel, M. A., *et al.*, Mice lacking the CCR9 CC-chemokine receptor show a mild impairment of early T- and B-cell development and a reduction in T-cell receptor $\gamma\delta(+)$ gut intraepithelial lymphocytes. *Blood*, **98**, 2626-2632 (2001).
5. Youn, B. S., *et al.*, Blocking of c-FLIP(L)-independent cycloheximide-induced apoptosis or Fas-mediated apoptosis by the CC chemokine receptor 9/TECK interaction. *Blood*, **98**, 925-933 (2001).

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