

DESCRIPTION

Source *E. coli*-derived
Gln24-Leu150
Accession # O15444

N-terminal Sequence Analysis Gln24

Predicted Molecular Mass 14 kDa

SPECIFICATIONS

SDS-PAGE 14 kDa, reducing conditions

Activity Measured by its ability to chemoattract BaF3 mouse pro-B cells transfected with human CCR9. The ED₅₀ for this effect is typically 30-180 ng/mL.

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation Lyophilized from a 0.2 µm filtered solution in HCl with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

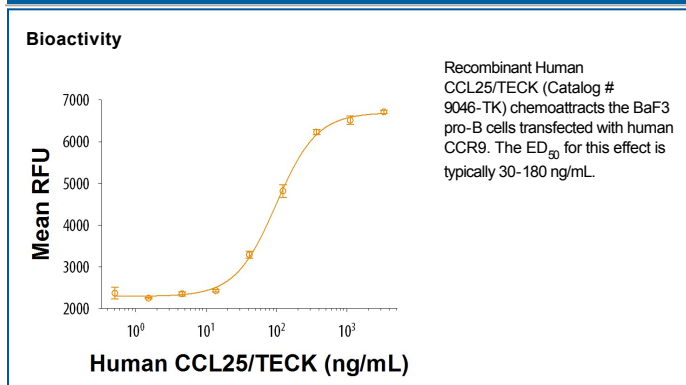
Reconstitution Reconstitute at 250 µg/mL in 4 mM HCl.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA



BACKGROUND

CCL25, also known as TECK (thymus-expressed chemokine), is a CC chemokine that regulates the trafficking of lymphocytes in the thymus and small intestine. Mature human CCL25 shares 40% amino acid sequence identity with mouse and rat CCL25 (1). CCL25 is produced by stromal cells in the thymus and epithelial cells of the small intestine, particularly the jejunum and ileum (1-3). It binds to and induces chemoattraction through CCR9 (1, 4, 5), and both human and mouse proteins act on human CCR9 (4). CCR9 is expressed on immature pre-T cells and thymocytes (5, 6). CCL25 induces the homing of several lymphocyte populations to the small intestine (3), including Integrin $\alpha 4\beta 7^+$ $\gamma \delta$ T cells (6, 7), Integrin $\alpha E\beta 7^+$ CD8⁺ T cells (8), and IgA-producing plasma cells (2). In cancer, functional CCR9 mediates the metastasis of melanoma cells to the small intestine (9), contributes to the CCL25-dependent migration and invasion of some breast carcinomas (10), and attracts mesenchymal stromal cells to CCL25-expressing multiple myelomas (11). CCL25 contributes to the severity of chronic inflammation in rheumatoid arthritis where it attracts CCR9⁺ monocytes and macrophages (12), in endometriosis where it promotes the invasiveness of stromal cells (13), and in atherosclerosis where it contributes to the accumulation of CCR9⁺ macrophages in arterial plaques (14).

References:

1. Vicari, A.P. *et al.* (1997) *Immunity* **7**:291.
2. Bowman, E.P. *et al.* (2002) *J. Exp. Med.* **195**:269.
3. Kunkel, E.J. *et al.* (2000) *J. Exp. Med.* **192**:761.
4. Zaballos, A. *et al.* (1999) *J. Immunol.* **162**:5671.
5. Youn, B.-S. *et al.* (1999) *Blood* **94**:2533.
6. Uehara, S. *et al.* (2002) *J. Immunol.* **168**:134.
7. Costa, M.F.S. *et al.* (2012) *Eur. J. Immunol.* **42**:1250.
8. Svensson, M. *et al.* (2002) *J. Clin. Invest.* **110**:1113.
9. Amersi, F.F. *et al.* (2008) *Clin. Cancer Res.* **14**:638.
10. Johnson-Holiday, C. *et al.* (2011) *Int. J. Oncol.* **38**:1279.
11. Xu, S. *et al.* (2012) *Stem Cells* **30**:266.
12. Schmutz, C. *et al.* (2010) *Arthritis Res. Ther.* **12**:R161.
13. Wang, Y. *et al.* (2010) *Cell. Mol. Immunol.* **7**:51.
14. Alla, J.A. *et al.* (2010) *J. Biol. Chem.* **285**:23496.