

DESCRIPTION

Source *E. coli*-derived
Gln21-Phe180, with an N-terminal Met
Accession # Q9UHF5

N-terminal Sequence Analysis Met

Predicted Molecular Mass 18.3 kDa

SPECIFICATIONS

Activity Measured by its ability to induce IL-8 secretion by HepG2 human hepatocellular carcinoma cells. Tang, Y. *et al.* (2011) Clin. Exp. Immunol. **166**:281.
The ED₅₀ for this effect is typically 0.4-2 µg/mL.

Measured by its ability to bind with recombinant human IL-17B R Fc Chimera in a functional ELISA.

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

Purity >97%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation Lyophilized from a 0.2 µm filtered solution in NaH₂PO₄ and NaCl with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 µg/mL in sterile 4 mM HCl containing at least 0.1% human or bovine serum albumin.

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.

BACKGROUND

The Interleukin 17 (IL-17) family proteins, comprising six members (IL-17, IL-17B through IL-17F), are secreted, structurally related proteins that share a conserved cystine-knot fold near the C-terminus, but have considerable sequence divergence at the N-terminus (1, 2). With the exception of IL-17B, which exists as a non-covalently linked dimer, all IL-17 family members are disulfide-linked dimers (3). IL-17 family proteins are pro-inflammatory cytokines that induce local cytokine production and are involved in the regulation of immune functions (1, 2). Two receptors (IL-17 R, and IL-17B R), which are activated by IL-17 family members, have been identified. In addition, at least three additional orphan type I transmembrane receptors with homology to IL-17 R, including IL-17 RL (IL-17 RC), IL-17 RD, and IL-17 RE, have also been reported (1-4). The functions of IL-17 RC, D, and E are not known.

Human IL-17B cDNA encodes a 180 aa protein with a putative 20 aa signal peptide (5, 6). Human and mouse IL-17B share 88% amino acid sequence identity. Among IL-17 family members, IL-17B is most closely related to IL-17D, sharing 27% aa sequence homology. IL-17B is expressed highly in spinal cord, and at lower levels in brain, kidney, lung, small intestine, prostate, testes, pancreas, adrenal gland and trachea (5-7). Expression of IL-17B has also been detected in chondrocytes in articular cartilage (2). IL-17B binds the IL-17B receptor but not IL-17 R and exhibits bioactivities distinct from those of IL-17 (5, 6).

References:

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2. Moseley, T.A. *et al.* (2003) Cytokine & Growth Factor Rev. **14**:155.
3. Hymowitz, S.G. *et al.* (2001) EMBO J. **20**:5332.
4. Haudenschild, D. *et al.* (2002) J. Biol. Chem. **277**:4309.
5. Shi, Y. *et al.* (2000) J. Biol. Chem. **275**:19167.
6. Li, H. *et al.* (2000) Proc. Natl. Acad. Sci. USA **97**:773.
7. Moore, E.E. *et al.* (2002) Neuromuscul. Disord. **12**:141.