

DESCRIPTION

Source *E. coli*-derived
Leu25-Glu176, with an N-terminal Met
Accession # AAF36679

N-terminal Sequence Analysis Met

Predicted Molecular Mass 17.6 kDa

SPECIFICATIONS

Activity Measured in a cell proliferation assay using BaF3 mouse pro-B cells transfected with human IL-20 R α and human IL-20 R β . The ED₅₀ for this effect is typically 0.2-0.6 ng/mL.

Endotoxin Level <0.01 EU per 1 μ g 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 μ m filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 10 μ g/mL in sterile PBS 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

Human Interleukin 20 (IL-20) was identified by searching sequence databases for translated sequences containing a signal sequence and amphipathic helices found in helical cytokines. Human IL-20 is synthesized as a 176 amino acid (aa) precursor with a 24 aa signal sequence and a 152 aa mature segment. There are no N-linked glycosylation sites and it is doubtful that the native molecule is glycosylated. Although IL-20 is a distant member of the IL-10 family, it functions as a monomer. IL-20 shares less than 40% aa sequence identity with other IL-10 family members. Mouse and human IL-20 share 77% aa sequence identity in their mature segments. Human IL-20 is active on mouse cells. IL-20 production has been found in skin and trachea. In particular, activated keratinocytes and, possibly, monocytes are reported to express IL-20. There are two heterodimeric receptor complexes for IL-20. The first is composed of IL-20 R α and IL-20 R β . The second is composed of IL-22 R and IL-20 R β . Whereas the IL-22 R/IL-20 R β complex is shared with IL-24/mda-7, the IL-20 R α /IL-20 R β complex is shared with both IL-19 and IL-24. Little is known about the function of IL-20. It is reported to induce the proliferation of multipotential hematopoietic progenitor cells, direct the differentiation and expansion of keratinocytes, and promote the release of proinflammatory mediators in keratinocytes and other IL-20 receptor expressing cells (1 - 6).

References:

1. Blumberg, H. *et al.* (2001) *Cell* **104**:9.
2. Liu, L. *et al.* (2003) *Blood* **102**:3206.
3. Rich, B.E. and T.S. Kupper (2001) *Curr. Biol.* **11**:R531.
4. Pestka, S. *et al.* (2004) *Annu. Rev. Immunol.* **22**:929.
5. Dumoutier, L. (2001) *J. Immunol.* **167**:3545.
6. Romer, J. (2003) *J. Invest. Dermatol.* **121**:1306.