

#### DESCRIPTION

**Source** *E. coli*-derived  
Gln26-Arg170, with an N-terminal Met  
Accession # P03180

**N-terminal Sequence Analysis** Met

**Structure / Form** Noncovalently-linked homodimer

**Predicted Molecular Mass** 17.2 kDa

#### SPECIFICATIONS

**Activity** Measured in a cell proliferation assay using MC/9-2 mouse mast cells. Thompson-Snipes, L. *et al.* (1991) *J. Exp. Med.* **173**:507. The ED<sub>50</sub> for this effect is typically 3-15 ng/mL.

**Endotoxin Level** <1.0 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** Supplied as a 0.2 µm filtered solution in Tris and NaCl. See Certificate of Analysis for details.

#### PREPARATION AND STORAGE

**Shipping** The product is shipped with dry ice or equivalent. 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, -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after opening.
- 3 months, -20 to -70 °C under sterile conditions after opening.

#### BACKGROUND

Interleukin 10 (IL-10) is a pleiotropic cytokine that plays an important role in regulating inflammatory and immune responses. It is a potent suppressant of proinflammatory cytokine production by monocytes/macrophages and neutrophils. It is also an inhibitor of macrophage and T cell effector functions. Homologs of mammalian IL-10 have been identified in the genome of several viruses, including Epstein-Barr virus (EBV), poxvirus Orf, baboon cytomegalovirus, and human and equine herpes virus. In the EBV genome, the BCRF1 open reading frame encodes the EBV IL-10 (vIL-10). The viral IL-10 precursor is a 170 amino acid residue (aa) protein with a putative 25 aa signal peptide that is cleaved to yield the 145 aa mature protein. The EBV IL-10 precursor shares approximately 78% and 65% amino acid sequence homology with human and mouse IL-10, respectively. Most of the deviations are localized to the signal peptide and the first 20 amino-terminal residues. Viral IL-10 is expressed during the late phase of the lytic cycle of EBV infection. Viral IL-10 is a partial agonist of mammalian IL-10 and shares many of their activities. It is likely that vIL-10 may have a role in host immune evasion.

#### References:

1. Moore, K.W. *et al.* (1993) *Annu. Rev. Immunol.* **11**:165.