

**DESCRIPTION**

**Source** *E. coli*-derived  
 Ala26-Lys176  
 Accession # AAF63437

**N-terminal Sequence Analysis** Ala26

**Structure / Form** Noncovalently-linked homodimer

**Predicted Molecular Mass** 17.6 kDa

**SPECIFICATIONS**

**Activity** Measured by its ability to inhibit proliferation of human peripheral blood lymphocytes (PBL).  
 0.5 ng/mL will cause >35% inhibition of PHA (0.25 µg/mL)-induced PBL proliferation.

**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 NaH<sub>2</sub>PO<sub>4</sub> 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 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**

Interleukin-10 (IL-10) is a pleiotropic cytokine that plays a crucial role in regulating immune and inflammatory responses (1). It has closely related homologs in the genome of several viruses including the human cytomegalovirus (HCMV), a prevalent pathogen that can remain in humans as a latent infection (2). Viruses use multiple strategies to avoid detection and clearance by the host immune system. One of these strategies is to express virus-encoded host cytokine homologs, such as IL-10, to modulate the host immune system to the virus' advantage. HCMV IL-10 is encoded from noncontiguous stretches in the viral genome and is transcribed early during infection. It shares 27% amino acid sequence identity with the endogenous human IL-10. Despite its low homology with the human protein, it can bind to the human IL-10 receptor complex and induces signal transduction. HCMV IL-10 has been shown to suppress cytokine production and inhibit proliferation of mitogen-stimulated human peripheral blood mononuclear cells. HCMV IL-10 can also down regulate the antigen-presenting and accessory cell functions of human monocytes. These immunosuppressive properties of HCMV IL-10 likely contribute to immune evasion during virus infection (3).

**References:**

1. Moore, K.W. *et al.* (2001) *Annu. Rev. Immunol.* **19**:683.
2. Kolenko, S.V. *et al.* (2000) *Proc. Natl. Acad. Sci. USA* **97**:1695.
3. Spencer, J.V. *et al.* (2002) *J. Virol.* **76**:1285.