

DESCRIPTION

Source *E. coli*-derived viral IL-10 protein
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 ED₅₀ for this effect is 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.