

DESCRIPTION

Source *E. coli*-derived canine IL-10 protein
Ser20-Ile179
Accession # XP_855560

N-terminal Sequence Analysis Ser20

Structure / Form Noncovalently-linked homodimer

Predicted Molecular Mass 18.9 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 0.3-1 ng/mL.

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 PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 µg/mL in sterile PBS.

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

IL-10, initially designated cytokine synthesis inhibitory factor (CSIF), was originally identified as a product of murine T helper 2 (Th2) clones that inhibited the cytokine production by Th1 clones. The canine homologue of mouse IL-10 has been cloned. Canine IL-10 shares 80% amino acid sequence homology with human IL-10 and 72% sequence homology with mouse IL-10.

IL-10 is a pleiotropic cytokine that can exert either immunostimulatory or immunosuppressive effects on a variety of cell types. It is a potent immunosuppressant of macrophage functions. *In vitro*, IL-10 can inhibit the accessory function and antigen-presenting capacity of monocytes by, among other effects, downregulating class II MHC expression. Thus, IL-10 can inhibit monocyte/macrophage-dependent, antigen stimulated cytokine synthesis (especially IFN-γ) by human PBMNC and NK, and mouse Th1 cells. Additionally, IL-10 is a potent inhibitor of monocyte/macrophage activation and its resultant cytotoxic effects. As an immunostimulatory cytokine, IL-10 can act on B cells to enhance their viability, cell proliferation, Ig secretion, and class II MHC expression. Aside from B lymphocytes, IL-10 is also a growth co-stimulator for thymocytes and mast cells, as well as an enhancer of cytotoxic T cell development.

References:

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