Saint Louis, Missouri 63103 USA
Telephone (800) 325-5832 (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

IL-10/Fc CHIMERA (NON-LYTIC)
Human, Recombinant
Expressed in NS.1 cells

Product Number **I 9404**
Storage Temperature –20 °C

Product Description

IL-10 (Interleukin-10)/Fc Chimera is a soluble 98 kDa dimeric fusion protein consisting of human IL-10 fused to mutant human IgG1 Fc. It is purified from tissue culture supernatants of NS.1 cell transfectants. This fusion protein possesses both the biological functions of IL-10 as an immune anti-inflammatory agent and the prolonged circulating half-life determined by the Fc domain. Mutations to the complement (C1q) and FcγRI binding sites of the Fcγ1 fragment render IL-10/Fc unable to facilitate antibody directed cytotoxicity (ADCC) and complement mediated cytotoxicity (CDC).[1]

Human Interleukin-10 (IL-10) is a 160 amino acid polypeptide cytokine with activity on both human and mouse target cells.[2] Human IL-10 is produced by CD4+ T cells and T cell clones, thymocytes, B cells and B cell lymphomas, keratinocytes, mast cell lines and macrophages.[3,4] *In vitro*, human IL-10 inhibits cytokine synthesis by T cells, natural killer cells, and monocytes/macrophages.[3] IL-10 stimulates the growth of stem cells, mast cells and thymocytes,[4] and enhances cytotoxic T cell development[5] and co-stimulates B cell differentiation and immunoglobulin secretion.[6] In addition, IL-10 inhibits class II MHC expression on macrophages.[7] Several studies have suggested the potential application of IL-10 as an anti-inflammatory agent for the treatment of septic shock[8] and as an immunosuppressive agent in certain T cell mediated autoimmune diseases.[9,10]

Reagent

IL-10/Fc Chimera is supplied as 10 µg protein in 0.22 µm sterile-filtered PBS, pH 7.4 (50 mM sodium phosphate, 100 mM potassium chloride, 150 mM sodium chloride) and contains no preservatives.

Preparation Instructions

This chimera can be further diluted to the desired working concentration in sterile PBS or culture medium.

Storage/Stability

Store at –20 °C. Store working solutions at 4 °C for up to one week. Repeated freeze/thaw cycles are not recommended

Product Profile

The biological activity is determined using a cytokine synthesis inhibition assay, measuring inhibition of IL-6 production by PU5-l cells. Activity is approximately 6,000 units/µg.

Purity: >98% by SDS-PAGE

References

1. Zheng, X.X., et al. J. Immunol., **154**, 5590 (1995).
2. Viera, P., et al., Proc. Natl. Acad. Sci. USA, **88**, 172 (1991).
3. Moore, K. W., et al., Annual Rev. Immunol., **11**, 165 (1993).
4. Resnick, D., et al., Progress in Growth Factor Research, **4**, 201 (1992).
5. Chen, W., et al., J. Immunol., **147**, 528 (1991)
6. Rousset, F., et al., Proc. Natl. Acad. Sci. USA, **89**, 1890 (1992).
7. de-Waal-Malefyt, R., et al., J. Exp. Med., **174**, 915 (1991).
8. Gerard, C., et al., J. Exp. Med., **177**, 547 (1993).
9. Fiorentino, D.F., et al., J. Immunol., **147**, 3815 (1991).
10. Moore, K., et al., Science, **248**, 1230 (1990).

CMH 9/01