

IL-10 (hBA-160): sc-4603

BACKGROUND

Interleukin 10, or IL-10, is a 178 amino acid protein that is primarily secreted by TH2 clones. IL-10 has dual functions, the first of which is the suppression of cytokine production by TH1 clones responding to antigen presented by monocyte and macrophage antigen presenting cells (APCs). The second function consists of the inhibition of response of cytokine targeted cells, possibly by the downregulation of CD25 (the interleukin-2 receptor) on macrophages and B lymphocytes. Human and murine IL-10 exhibit 81% sequence identity at the amino acid level, and share 73% identity at the cDNA level. Both human and murine IL-10 are acid-labile and exist as non-covalently-linked homodimers in solution. IL-10 exerts its biological activity through the IL-10 receptor (IL-10R), a 560 amino acid, 110 kDa glycoprotein whose expression can be induced in cultured macrophages and fibroblasts by lipopolysaccharide (LPS) stimulation. IL-10 expression has been shown to be elevated in HIV-1 infected individuals and has been implicated in the progression of the disease.

REFERENCES

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3. Weber-Nordt, R.M., Meraz, M.A., and Schreiber, R.D. 1994. Lipopolysaccharide-dependent induction of IL-10 receptor expression on murine fibroblasts. *J. Immunol.* 153: 3734-3744.
4. Bromberg, J.S. 1995. IL-10 immunosuppression in transplantation. *Curr. Opin. Immunol.* 7: 639-643.
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SOURCE

IL-10 (hBA-160) is produced in *E. coli* as 45 kDa biologically active, GST-tagged fusion protein corresponding to 160 amino acids of IL-10 of human origin.

PRODUCT

IL-10 (hBA-160) is purified from bacterial lysates (>98%); supplied as 50 μ g purified protein.

BIOLOGICAL ACTIVITY

IL-10 (hBA-160) is biologically active as determined by the dose-dependent co-stimulation (with murine IL-4) of MC/9 cells.

Expected ED₅₀: <2 ng/ml.

Specific Activity: Greater than 5 x 10⁵ units/mg.

RECONSTITUTION

In order to avoid freeze/thaw damaging of the active protein, dilute protein when first used to desired working concentration. Either a sterile filtered standard buffer (such as 50mM TRIS or 1X PBS) or water can be used for the dilution. Store any thawed aliquot in refrigeration at 2° C to 8° C for up to four weeks, and any frozen aliquot at -20° C to -80° C for up to one year. It is recommended that frozen aliquots be given an amount of standard cryopreservative (such as Ethylene Glycol or Glycerol 5-20% v/v), and refrigerated samples be given an amount of carrier protein (such as heat inactivated FBS or BSA to 0.1% v/v) or non-ionic detergent (such as Triton X-100 or Tween 20 to 0.005% v/v), to aid stability during storage.

STORAGE

Store desiccated at -20° C; stable for one year from the date of shipment.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.