

IL-10 (JES5-2A5): sc-52561

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 IL-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 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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- Weber-Nordt, R.M., et al. 1994. Lipopolysaccharide-dependent induction of IL-10 receptor expression on murine fibroblasts. *J. Immunol.* 153: 3734-3744.
- Bromberg, J.S. 1995. IL-10 immunosuppression in transplantation. *Curr. Opin. Immunol.* 7: 639-643.
- Finnegan, A., et al. 1996. IL-10 cooperates with TNF- α to activate HIV-1 from latently and acutely infected cells of monocyte/macrophage lineage. *J. Immunol.* 156: 841-851.

CHROMOSOMAL LOCATION

Genetic locus: Il10 (mouse) mapping to 1 E4.

SOURCE

IL-10 (JES5-2A5) is a rat monoclonal antibody raised against recombinant IL-10 of mouse origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

IL-10 (JES5-2A5) is recommended for detection of IL-10 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for IL-10 siRNA (m): sc-39635, IL-10 shRNA Plasmid (m): sc-39635-SH and IL-10 shRNA (m) Lentiviral Particles: sc-39635-V.

Molecular Weight of IL-10 monomer: 20 kDa.

Molecular Weight of IL-10 dimer: 37 kDa.

SELECT PRODUCT CITATIONS

- Malcolm, K.C., et al. 1994. Hemin therapy improves kidney function in male streptozotocin-induced diabetic rats: role of the heme oxygenase/atrial natriuretic peptide/adiponectin axis. *J. Biol. Chem.* 269: 25951-25954.
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- Yang, M., et al. 2012. Serum-glucocorticoid regulated kinase 1 regulates alternatively activated macrophage polarization contributing to Angiotensin II-induced inflammation and cardiac fibrosis. *Arterioscler. Thromb. Vasc. Biol.* 32: 1675-1686.
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- Toda, G., et al. 2020. Insulin- and lipopolysaccharide-mediated signaling in adipose tissue macrophages regulates postprandial glycemia through Akt-mTOR activation. *Mol. Cell* 79: 43-53.e4.
- Yong, L., et al. 2022. Calcium/calmodulin-dependent protein kinase IV promotes imiquimod-induced psoriatic inflammation via macrophages and keratinocytes in mice. *Nat. Commun.* 13: 4255.



See **IL-10 (A-2): sc-365858** for IL-10 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.