

IL-10 (NYRmIL-10): sc-73309

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

- Feng, L., et al. 1993. Molecular cloning of rat cytokine synthesis inhibitory factor (IL-10) cDNA and expression in spleen and macrophages. *Biochem. Biophys. Res. Commun.* 192: 452-458.
- Cohen, S.B., et al. 1994. IL-10 enhances expression of the IL-2 receptor α chain on T cells. *Immunology* 83: 329-332.
- Weber-Nordt, R.M., et al. 1994. Lipopolysaccharide-dependent induction of IL-10 receptor expression on murine fibroblasts. *J. Immunol.* 153: 3734-3744.

CHROMOSOMAL LOCATION

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

SOURCE

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

PRODUCT

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

APPLICATIONS

IL-10 (NYRmIL-10) is recommended for detection of IL-10 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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: 21 kDa.

STORAGE

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

SELECT PRODUCT CITATIONS

- Petrasek, J., et al. 2011. Interferon regulatory factor 3 and type I interferons are protective in alcoholic liver injury in mice by way of crosstalk of parenchymal and myeloid cells. *Hepatology* 53: 649-660.
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- Olgun, N.S., et al. 2014. BQ-123 prevents LPS-induced preterm birth in mice via the induction of uterine and placental IL-10. *Toxicol. Appl. Pharmacol.* 282: 275-284.
- Song, J., et al. 2014. Cardiac endothelial cell-derived exosomes induce specific regulatory B cells. *Sci. Rep.* 4: 7583.
- Fiume, G., et al. 2015. Impairment of T cell development and acute inflammatory response in HIV-1 Tat transgenic mice. *Sci. Rep.* 5: 13864.
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- Kumar, P., et al. 2017. Inhibition of HDAC enhances STAT acetylation, blocks NF κ B, and suppresses the renal inflammation and fibrosis in Npr1 haplotype male mice. *Am. J. Physiol. Renal Physiol.* 313: F781-F795.
- Gugliandolo, A., et al. 2018. *Eruca sativa* seed extract: a novel natural product able to counteract neuroinflammation. *Mol. Med. Rep.* 17: 6235-6244.
- Bortolozzo, A.S.S., et al. 2018. The plant proteinase inhibitor CrataBL plays a role in controlling asthma response in mice. *Biomed Res. Int.* 2018: 9274817.
- Ito, J.T., et al. 2019. Th17/Treg imbalance in COPD progression: a temporal analysis using a CS-induced model. *PLoS ONE* 14: e0209351.
- Lee, S.Y., et al. 2020. Anti-inflammatory effect of *Curcuma longa* and *Allium hookeri* co-treatment via NF κ B and Cox-2 pathways. *Sci. Rep.* 10: 5718.

RESEARCH USE

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



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.