

IL-10 (E-10): sc-8438

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 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.

CHROMOSOMAL LOCATION

Genetic locus: IL10 (human) mapping to 1q32.1.

SOURCE

IL-10 (E-10) is a mouse monoclonal antibody raised against amino acids 19-178 of IL-10 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-10 (E-10) is available conjugated to agarose (sc-8438 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8438 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8438 PE), fluorescein (sc-8438 FITC), Alexa Fluor® 488 (sc-8438 AF488), Alexa Fluor® 546 (sc-8438 AF546), Alexa Fluor® 594 (sc-8438 AF594) or Alexa Fluor® 647 (sc-8438 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-8438 AF680) or Alexa Fluor® 790 (sc-8438 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

IL-10 (E-10) is recommended for detection of IL-10 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IL-10 siRNA (h): sc-39634, IL-10 shRNA Plasmid (h): sc-39634-SH and IL-10 shRNA (h) Lentiviral Particles: sc-39634-V.

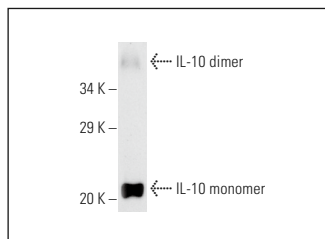
Molecular Weight of IL-10 monomer: 20 kDa.

Molecular Weight of IL-10 dimer: 37 kDa.

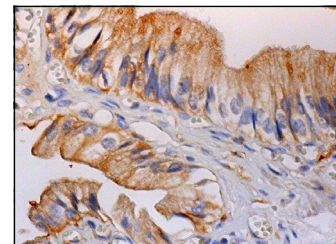
STORAGE

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

DATA



IL-10 (E-10): sc-8438. Western blot analysis of human recombinant IL-10.



IL-10 (E-10): sc-8438. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic and membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Urosecic, M., et al. 2001. Human leukocyte antigen G up-regulation in lung cancer associates with high-grade histology, human leukocyte antigen class I loss and interleukin-10 production. *Am. J. Pathol.* 159: 817-824.
2. Spight, D., et al. 2005. Immunoregulatory effects of regulated, lung-targeted expression of IL-10 *in vivo*. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 288: L251-L265.
3. Sorrentino, C., et al. 2006. Endomyocardial infiltration by B and NK cells foreshadows the recurrence of cardiac allograft rejection. *J. Pathol.* 209: 400-410.
4. Cacev, T., et al. 2008. Influence of interleukin-8 and interleukin-10 on sporadic colon cancer development and progression. *Carcinogenesis* 29: 1572-1580.
5. Reuter, S., et al. 2009. Effect of curcumin on nuclear factor κB signaling pathways in human chronic myelogenous K562 leukemia cells. *Ann. N.Y. Acad. Sci.* 1171: 436-447.
6. Shamji, M.F., et al. 2010. Proinflammatory cytokine expression profile in degenerated and herniated human intervertebral disc tissues. *Arthritis Rheum.* 62: 1974-1982.
7. Chuang, C.Y., et al. 2012. Differential impact of IL-10 expression on survival and relapse between HPV16-positive and -negative oral squamous cell carcinomas. *PLoS ONE* 7: e47541.
8. Miao, B.P., et al. 2015. Nasopharyngeal cancer-derived microRNA-21 promotes immune suppressive B cells. *Cell. Mol. Immunol.* 12: 750-756.
9. Xu, H., et al. 2017. Methylene blue attenuates neuroinflammation after subarachnoid hemorrhage in rats through the Akt/GSK-3β/MEF2D signaling pathway. *Brain Behav. Immun.* 65: 125-139.

RESEARCH USE

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