

IL-12R β 1 (h4): 293T Lysate: sc-177380

BACKGROUND

IL-12, a heterodimeric cytokine composed of two disulfide-bonded glycoprotein subunits, p35 and p40, has pleiotropic activities including stimulation of the proliferation of activated T and NK cells, induction of IFN- γ production by PBMCs, enhancement of the lytic activity of NK/LAK cells and promotion of T helper (Th) 1 cell responses. The T cell response to IL-12 is mediated through two receptor proteins, designated IL-12R β 1 and IL-12R β 2. The genes encoding human IL-12R β 1 and IL-12R β 2 map to chromosomes 19p13.11 and 1p31.2, respectively, and the IL-12R β 2 protein product is detected at 130 kDa. Increased IL-12R β 2 expression is crucial in regulating Th1 differentiation, whereas IL-12R β 1 expression is less restricted. Inhibition of IL-12 activity may provide treatment for diseases associated with pathologic Th1 responses, such as multiple sclerosis or Crohn's disease, while administration of recombinant IL-12 may aid in the treatment for allergic disorders and asthma.

REFERENCES

- Gubler, U., et al. 1991. Co-expression of two distinct genes is required to generate secreted bioactive cytotoxic lymphocyte maturation factor. *Proc. Natl. Acad. Sci. USA* 88: 4143-4147.
- Wolf, S.F., et al. 1991. Cloning of cDNA for natural killer cell stimulatory factor, a heterodimeric cytokine with multiple biologic effects on T and natural killer cells. *J. Immunol.* 146: 3074-3081.
- Manetti, R.P., et al. 1993. Natural killer cell stimulatory factor interleukin-12 [IL-12] induces T helper type 1 (Th1)-specific immune responses and inhibits the development of IL-4-producing Th cells. *J. Exp. Med.* 177: 1199-1204.
- Yamamoto, K., et al. 1997. Assignment of IL-12R β 1 and IL12R β 2, interleukin-12 receptor β 1 and β 2 chains, to human chromosome 19 band p13.1 and chromosome 1 band p31.2, respectively, by *in situ* hybridization. *Cytogenet. Cell Genet.* 77: 257-258.
- Kawashima, T., et al. 1998. Interleukin-12 induces tyrosine phosphorylation of an 85 kDa protein associated with the interleukin-12 receptor β 1 subunit. *Cell. Immunol.* 186: 39-44.

CHROMOSOMAL LOCATION

Genetic locus: IL12RB1 (human) mapping to 19p13.11.

PRODUCT

IL-12R β 1 (h4): 293T Lysate represents a lysate of human IL-12R β 1 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

IL-12R β 1 (h4): 293T Lysate is suitable as a Western Blotting positive control for human reactive IL-12R β 1 antibodies.

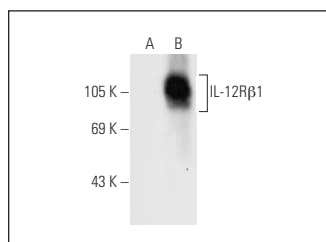
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

IL-12R β 1 (A-10): sc-166776 is recommended as a positive control antibody for Western Blot analysis of enhanced human IL-12R β 1 expression in IL-12R β 1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

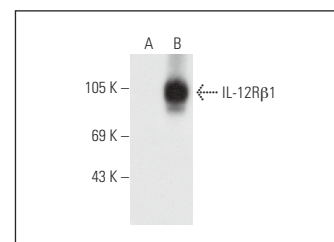
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



IL-12R β 1 (A-10): sc-166776. Western blot analysis of IL-12R β 1 expression in non-transfected: sc-117752 (A) and human IL-12R β 1 transfected: sc-177380 (B) 293T whole cell lysates.



IL-12R β 1 (E-6): sc-166805. Western blot analysis of IL-12R β 1 expression in non-transfected: sc-117752 (A) and human IL-12R β 1 transfected: sc-177380 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

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