

IL-12R β 1 (S-20): sc-18645

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 19p13.1 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

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- Yamamoto, K., et al. 1997. Assignment of IL-12R β 1 and IL12R β 2, interleukin-12 receptor beta 1 and beta 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 beta 1 subunit. Cell. Immunol. 186: 39-44.
- Gately, M.K., et al. 1998. The interleukin-12/interleukin-12-receptor system: role in normal and pathologic immune responses. Annu. Rev. Immunol. 16: 495-521.
- Parrello, T., et al. 2000. Up-regulation of the IL-12 receptor beta 2 chain in Crohn's disease. J. Immunol. 165: 7234-7239.

CHROMOSOMAL LOCATION

Genetic locus: Il12rb1 (mouse) mapping to 8 B3.3.

SOURCE

IL-12R β 1 (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of IL-12R β 1 of mouse origin.

STORAGE

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

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-18645 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IL-12R β 1 (S-20) is recommended for detection of IL-12R β 1 of mouse and rat 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IL-12R β 1 siRNA (m): sc-35650; and as shRNA Plasmid control antibody for IL-12R β 1 shRNA Plasmid (m): sc-35650-SH.

Molecular Weight of IL-12R β 1: 100 kDa.

Positive Controls: WEHI-231 whole cell lysate: sc-2213, WEHI-3 cell lysate: sc-3815 or BYDP whole cell lysate.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Li, W., et al. 2001. IL-12 antagonism enhances apoptotic death of T cells within hepatic allografts from Flt3 ligand-treated donors and promotes graft acceptance. J. Immunology 166: 5619-5628.

RESEARCH USE

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

MONOS
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Try **IL-12R β 1 (B-7): sc-365395**, our highly recommended monoclonal alternative to IL-12R β 1 (S-20).