SANTA CRUZ BIOTECHNOLOGY, INC.

IL-12Rβ2 (2H6): sc-293379

BACKGROUND

IL-12, a heterodimeric cytokine composed of two disulfide-bonded glycoprotein subunits, p35 and p40, has pleiotrophic 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-12Rβ-1 and IL-12Rβ-2. The genes encoding human IL-12Rβ-1 and IL-12Rβ-2 map to chromosomes 19p13.1 and 1p31.3, respectively. Increased IL-12Rβ-2 expression is crucial in regulating Th1 differentiation, whereas IL-12Rβ-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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2. 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.
3. 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.
4. Yamamoto, K., et al. 1997. Assignment of IL12RB1 and IL12RB2, interleukin-12 receptor β1 and β2 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.
5. Kawashima, T., et al. 1998. Interleukin-12 induces tyrosine phosphorylation of an 85-kDa protein associated with the interleukin-12 receptor β1 subunit. Cell. Immunol. 186: 39-44.
6. 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.
7. Parrello, T., et al. 2000. Up-regulation of the IL-12 receptor β2 chain in Crohn's disease. J. Immunol. 165: 7234-7239.

CHROMOSOMAL LOCATION

Genetic locus: IL12RB2 (human) mapping to 1p31.3.

SOURCE

IL-12Rβ2 (2H6) is a mouse monoclonal antibody raised against amino acids 105-214 of IL-12Rβ2 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IL-12Rβ2 (2H6) is recommended for detection of IL-12Rβ2 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

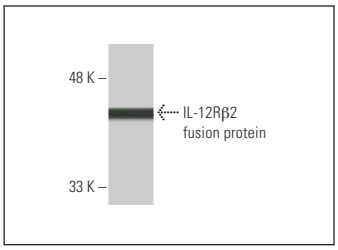
Suitable for use as control antibody for IL-12Rβ2 siRNA (h): sc-40033, IL-12Rβ2 shRNA Plasmid (h): sc-40033-SH and IL-12Rβ2 shRNA (h) Lentiviral Particles: sc-40033-V.

Molecular Weight of IL-12Rβ2: 130 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



IL-12Rβ2 (2H6): sc-293379. Western blot analysis of human recombinant IL-12Rβ2 fusion protein.

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.

PROTOCOLS

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