

# IL-12R $\beta$ 2 (2H6): sc-293379

## 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- $\gamma$  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 $\beta$ -1 and IL-12R $\beta$ -2. The genes encoding human IL-12R $\beta$ -1 and IL-12R $\beta$ -2 map to chromosomes 19p13.1 and 1p31.3, respectively. Increased IL-12R $\beta$ -2 expression is crucial in regulating Th1 differentiation, whereas IL-12R $\beta$ -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 IL12RB1 and IL12RB2, 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.
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- 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: IL12RB2 (human) mapping to 1p31.3.

## SOURCE

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

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

IL-12R $\beta$ 2 (2H6) is recommended for detection of IL-12R $\beta$ 2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

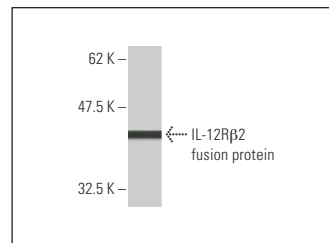
Suitable for use as control antibody for IL-12R $\beta$ 2 siRNA (h): sc-40033, IL-12R $\beta$ 2 shRNA Plasmid (h): sc-40033-SH and IL-12R $\beta$ 2 shRNA (h) Lentiviral Particles: sc-40033-V.

Molecular Weight of IL-12R $\beta$ 2: 130 kDa.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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).

## DATA



IL-12R $\beta$ 2 (2H6): sc-293379. Western blot analysis of human recombinant IL-12R $\beta$ 2 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](http://www.scbt.com) for detailed protocols and support products.