

# p-IL-3R $\beta$ (Ser 585): sc-17008

## BACKGROUND

The human IL-3, IL-5 and GM-CSF receptors are each composed of both unique  $\alpha$  subunits and a common  $\beta$  subunit. The  $\alpha$  subunits are low affinity ligand binding proteins while the  $\beta$  subunits do not themselves bind ligand, but are required for high affinity binding by the  $\alpha$  subunits. In contrast, the mouse IL-3 receptor has two distinct  $\beta$  subunits, one that functions only in IL-3 mediated cell signaling and a second that is shared with IL-5 and GM-CSF. The murine  $\beta$ -subunits are 91% homologous at the amino acid level but only 56% homologous to the human  $\beta$  subunit. Although neither the murine nor the human  $\beta$  subunit contains tyrosine kinase domains, both activate tyrosine phosphorylation mediated signaling pathways.

## REFERENCES

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- Miyajima, A., et al. 1992. Cytokine receptors and signal transduction. *Annu. Rev. Immunol.* 10: 295-331.
- Tavernier, J., et al. 1992. A human high affinity interleukin-5 receptor (IL-5R) is composed of an IL-5 specific chain and a  $\beta$  chain shared with the receptor for GM-CSF. *Cell* 66: 1175-1184.
- Hara, T., et al. 1992. Two distinct functional receptors for mouse interleukin-3. *EMBO J.* 11: 1875-1884.
- Sakamaki, K., et al. 1992. Critical cytoplasmic domains of the common  $\beta$  subunit of the human GM-CSF, IL-3, and IL-5 receptors for growth signal transduction and tyrosine phosphorylation. *EMBO J.* 11: 3541-3549.
- Goodall, G.J., et al. 1993. A model for the interaction of the GM-CSF, IL-3 and IL-5 receptors with their ligands. *Growth Factors* 8: 87-97.
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## CHROMOSOMAL LOCATION

Genetic locus: CSF2RB (human) mapping to 22q12.3.

## SOURCE

p-IL-3R $\beta$  (Ser 585) is a goat polyclonal antibody raised against a short amino acid sequence containing Ser 585 phosphorylated IL-3R $\beta$  of human 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  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17008 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

p-IL-3R $\beta$  (Ser 585) is recommended for detection of Ser 585 phosphorylated IL-3R $\beta$  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)], 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).

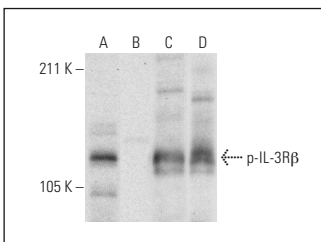
Suitable for use as control antibody for IL-3R $\beta$  siRNA (h): sc-40060, IL-3R $\beta$  shRNA Plasmid (h): sc-40060-SH and IL-3R $\beta$  shRNA (h) Lentiviral Particles: sc-40060-V.

Positive Controls: AML-193 whole cell lysate: sc-364182.

## 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 B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 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.

## DATA



Western blot analysis of IL-3R $\beta$  phosphorylation in untreated (A, C) and lambda protein phosphatase (sc-200312A) treated (B, D) AML-193 whole cell lysates. Antibodies tested include p-IL-3R $\beta$  (Ser 585)-R: sc-17008-R (A, B) and IL-3/IL-5/GM-CSFR $\beta$  (F-12): sc-393281 (C, D).

## RESEARCH USE

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