

# IL-12A p35 (H-197): sc-7925

## BACKGROUND

Interleukin-12 (IL-12), also known as natural killer cell stimulatory factor (NKSF) and cytotoxic lymphocyte maturation factor (CLMF), is a pleiotropic cytokine that affects both natural killer (NK) cells and T lymphocytes. IL-12 is a heterodimer of subunit IL-12A p35 and subunit IL-12B p40 that is secreted by a wide variety of antigen presenting cells (APCs), including phagocytes, B cells and Langerhans cells. It is involved in mediating many aspects of antiviral immunity. In addition to stimulating T helper cell development, IL-12 is a potent inducer of interferon- $\gamma$  (IFN- $\gamma$ ) production by T cells and NK cells. Increased IL-12 production is a consequence of EBV, CMV, LCMV or HSV infection. While it is unclear what separate effects can be attributed to each IL-12 subunit, evidence suggests IL-12A p35 is the biologically active component responsible for signal transduction via the IL-12 receptor.

## REFERENCES

- Gubler, U., et al. 1991. Coexpression of two distinct genes is required to generate secreted bioactive cytotoxic lymphocyte maturation factor. *Proc. Natl. Acad. Sci. USA* 88: 4143-4147.
- Chizzonite, R., et al. 1991. IL-12: monoclonal antibodies specific for the 40 kDa subunit block receptor binding and biologic activity on activated human lymphoblasts. *J. Immunol.* 147: 1548-1556.
- Davis, S., et al. 1993. LIFR  $\beta$  and gp130 as heterodimerizing signal transducers of the tripartite CNTF receptor. *Science* 260: 1805-1808.
- Ma, X., et al. 1996. The interleukin-12 p40 gene promoter is primed by interferon- $\gamma$  in monocytic cells. *J. Exp. Med.* 183: 147-157.
- Kanangat, S., et al. 1996. Herpes simplex virus type 1-mediated upregulation of IL-12 (p40) mRNA expression. Implications in immunopathogenesis and protection. *J. Immunol.* 156: 1110-1116.
- Orange, J.S., et al. 1996. An absolute and restricted requirement for IL-12 in natural killer cell IFN- $\gamma$  production and antiviral defense. Studies of natural killer and T cell responses in contrasting viral infections. *J. Immunol.* 156: 1138-1142.
- Kang, K., et al. 1996. IL-12 synthesis by human Langerhans cells. *J. Immunol.* 156: 1402-1407.

## CHROMOSOMAL LOCATION

Genetic locus: IL12A (human) mapping to 3q25.33; IL12a (mouse) mapping to 3 E1.

## SOURCE

IL-12A p35 (H-197) is a rabbit polyclonal antibody raised against amino acids 23-219 of IL-12A p35 of human origin.

## PRODUCT

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

## RESEARCH USE

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

## APPLICATIONS

IL-12A p35 (H-197) is recommended for detection of IL-12A p35 of human and, to a lesser extent, mouse and rat 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).

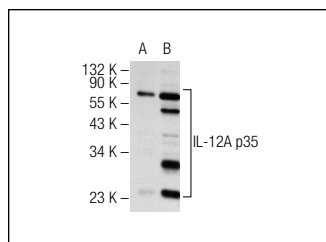
IL-12A p35 (H-197) is also recommended for detection of IL-12A p35 in additional species, including canine.

Suitable for use as control antibody for IL-12A p35 siRNA (h): sc-39638, IL-12A p35 siRNA (m): sc-39639, IL-12A p35 shRNA Plasmid (h): sc-39638-SH, IL-12A p35 shRNA Plasmid (m): sc-39639-SH, IL-12A p35 shRNA (h) Lentiviral Particles: sc-39638-V and IL-12A p35 shRNA (m) Lentiviral Particles: sc-39639-V.

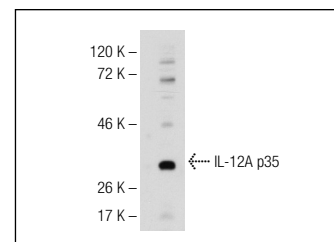
Molecular Weight of IL-12A p35: 35 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233.

## DATA



IL-12A p35 (H-197): sc-7925. Western blot analysis of IL-12A p35 expression in non-transfected: sc-110760 (A) and mouse IL-12A p35 transfected: sc-178789 (B) 293 whole cell lysates.



IL-12A p35 (H-197): sc-7925. Western blot analysis of IL-12A p35 expression in NIH/3T3 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Bubikat, A., et al. 2005. Local atrial natriuretic peptide signaling prevents hypertensive cardiac hypertrophy in endothelial nitric-oxide synthase-deficient mice. *J. Biol. Chem.* 280: 21594-21599.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **IL-12A p35/p70 (B-T21): sc-65323**, our highly recommended monoclonal alternative to IL-12A p35 (H-197).