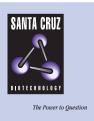
SANTA CRUZ BIOTECHNOLOGY, INC.

IL-12A p35 (M-19): sc-9350



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- γ (IFN- γ) 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.
- 3. Davis, S., et al. 1993. LIFR β and gp130 as heterodimerizing signal transducers of the tripartite CNTF receptor. Science 260: 1805-1808.
- 4. Ma, X., et al. 1996. The interleukin-12 p40 gene promoter is primed by interferon-γ 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-γ production and antiviral defense. Studies of natural killer and T cell responses in contrasting viral infections. J. Immunol. 156: 1138-1142.
- 7. Kang, K., et al. 1996. IL-12 synthesis by human Langerhans cells. J. Immunol. 156: 1402-1407.

CHROMOSOMAL LOCATION

Genetic locus: II12a (mouse) mapping to 3 E1.

SOURCE

IL-12A p35 (M-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of IL-12A p35 of mouse origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9350 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IL-12A p35 (M-19) is recommended for detection of IL-12A p35 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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-12A p35 siRNA (m): sc-39639, IL-12A p35 shRNA Plasmid (m): sc-39639-SH and IL-12A p35 shRNA (m) Lentiviral Particles: sc-39639-V.

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

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) Immunofluo-rescence: use donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- 1. Mogga, S.J., et al. 2003. *In situ* expression of CD40, CD40L (CD154), IL-12, TNF α , IFN- γ and TGF β 1 in murine lungs during slowly progressive primary tuberculosis. Scand. J. Immunol. 58: 327-334.
- 2. Hino, A., et al. 2004. Pathological role of large intestinal IL-12p40 for the induction of Th2-type allergic diarrhea. Am. J. Pathol. 164: 1327-1335.
- Wang, X., et al. 2006. Disruption of interleukin-18, but not interleukin-1, increases vulnerability to preterm delivery and fetal mortality after intrauterine inflammation. Am. J. Pathol. 169: 967-976.

STORAGE

Store at 4° C, **D0 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 or our catalog for detailed protocols and support products.