SANTA CRUZ BIOTECHNOLOGY, INC.

IL-12B p40 (H-306): sc-7926

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The interleukins (ILs) are a broad family of well characterized cytokines, primarily of hematopoietic cell origin. ILs are secreted by immune cells (mainly macrophages, B cells or T cells) that regulate a wide range of immune system functions. The functions of different ILs vary from regulating inflammatory and immune responses, functioning as an autocrine factor and regulating and/or inhibiting other ILs. IL-12 is responsible for the differentiation of naive $CD4^+$ T cells into type 1 helper T cells that produce interferon-γ (IFN-γ). It also activates production of tumor necrosis factor α (TNFα) from T and natural killer (NK) cells. IL-12 is a heterodimer composed of subunits IL-12A p35 and IL-12B p40. The p40 subunit of IL-12 also combines with p19, a protein that shows no biological activity by itself, to form a biologically active, composite cytokine, IL-23. IL-23 shares some *in vivo* functions with IL-12, including activation of the transcription factor Stat4 and IFN-γ production and proliferation in PHA blast T cells, as well as in CD45RO (memory) T cells.

CHROMOSOMAL LOCATION

Genetic locus: IL12B (human) mapping to 5q33.3; Il12b (mouse) mapping to 11 B1.1.

SOURCE

IL-12B p40 (H-306) is a rabbit polyclonal antibody raised against amino acids 23-328 of IL-12B p40 of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

IL-12B p40 (H-306) is recommended for detection of IL-12B p40 of mouse, rat and 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)], 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-12B p40 (H-306) is also recommended for detection of IL-12B p40 in additional species, including equine and canine.

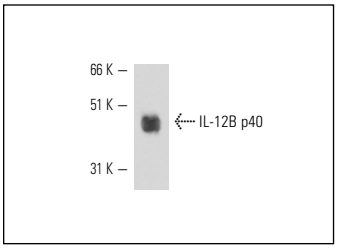
Suitable for use as control antibody for IL-12B p40 siRNA (h): sc-39640, IL-12B p40 siRNA (m): sc-39641, IL-12B p40 shRNA Plasmid (h): sc-39640-SH, IL-12B p40 shRNA Plasmid (m): sc-39641-SH, IL-12B p40 shRNA (h) Lentiviral Parti-cles: sc-39640-V and IL-12B p40 shRNA (m) Lentiviral Particles: sc-39641-V.

Molecular Weight of IL-12B p40: 40 kDa.

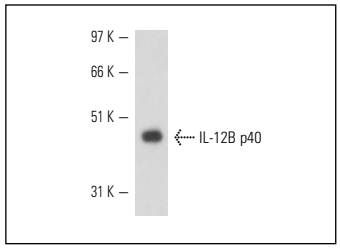
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



IL-12B p40 (H-306): sc-7926. Western blot analysis of human recombinant IL-12.



IL-12B p40 (H-306): sc-7926. Western blot analysis of mouse recombinant IL-12B.

SELECT PRODUCT CITATIONS

1. Ma, X., et al. 1997. Identification and characterization of a novel Ets-2 related nuclear complex implicated in the activation of the human interleukin-12 p40 gene promotor. J. Biol. Chem. 272: 10389-10395.

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.