SANTA CRUZ BIOTECHNOLOGY, INC.

IL-18 (2): sc-130324

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Four structurally related IL-1 receptor ligands have been described. These include three agonists designated IL-1α, IL-1β and IL-1γ/IL-18 and a specific receptor antagonist, IL-1Rα. IL-1α and IL-1β play critical roles in the regulation of the immune response and inflammation, serving as activators of T and B lymphocytes and NK (natural killer) cells. IL-18 (also referred to as IL-1γ) has been shown to augment the secretion of IFN-γ from T lymphocytes and increase NK cell activity in spleen cells. IL-18 exhibits 19% and 12% identity with IL-1α and IL-1β respectively over the twelve β-strands of the β-trefoil fold domain, which is a signature feature of the IL-1 family. The unusual leader sequence of IL-18 may be analogous to the IL-1β pro-domain which must be cleaved by the serine protease ICE for optimal secretion and biological activity. Originally described as IGIF (IFN-γ-inducing factor), IL-18 is induced by mouse liver subsequent to challenge with lipopolysaccharide (LPS).

REFERENCES

1. March, C.J., et al. 1985. Cloning, sequence and expression of two distinct human interleukin-1 complementary DNAs. Nature 315: 641-647.
2. Nakamura, K., et al. 1993. Purification of a factor which provides a costimulatory signal for γ interferon production. Infect. Immun. 61: 64-70.
3. Arend, W.P., et al. 1994. Binding of IL-1α, IL-1β, and IL-1 receptor antagonist by soluble IL-1 receptors and levels of soluble IL-1 receptors in synovial fluids. J. Immunol. 153: 4766-4774.
4. Dinarello, C.A. 1994. The interleukin-1 family: 10 years of discovery. FASEB J. 8: 1314-1325.
5. Okamura, H., et al. 1995. Cloning of a new cytokine that induces IFN-γ production by T cells. Nature 378: 88-91.
6. Bazan, J.F., et al. 1996. A newly defined interleukin-1? Nature 379: 591.
7. Fantuzzi, G., et al. 1996. Effect of endotoxin in IL-1β-deficient mice. J. Immunol. 157: 291-296.

CHROMOSOMAL LOCATION

Genetic locus: IL18 (human) mapping to 11q23.1.

SOURCE

IL-18 (2) is a mouse monoclonal antibody raised against recombinant IL-18 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

IL-18 (2) is recommended for detection of IL-18 of 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

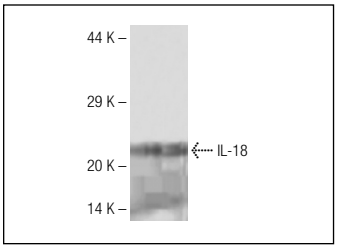
Suitable for use as control antibody for IL-18 siRNA (h): sc-39657, IL-18 shRNA Plasmid (h): sc-39657-SH and IL-18 shRNA (h) Lentiviral Particles: sc-39657-V.

Molecular Weight of IL-18 inactive precursor (pro-IL-18): 24 kDa.

Molecular Weight of mature IL-18: 18 kDa.

Positive Controls: Caco-2 cell lysate: sc-2262, HL-60 whole cell lysate: sc-2209 or Jurkat whole cell lysate: sc-2204.

DATA



IL-18 (2): sc-130324. Western blot analysis of human recombinant IL-18.

RESEARCH USE

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

CONJUGATES

See **IL-18 (E-8): sc-133127** for IL-18 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.