

# IL-18BP (PL-B12): sc-134364

## BACKGROUND

IL-18 (also referred to as IL-1 $\gamma$ ) has been shown to augment the secretion of IFN- $\gamma$  from T lymphocytes and to increase NK cell activity in spleen cells. IL-18 exhibits 19% and 12% identity with IL-1 $\alpha$  and IL-1 $\beta$ , respectively, over the 12  $\beta$ -strands of the  $\beta$ -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-1 $\beta$  pro-domain, which must be cleaved by the serine protease ICE for optimal secretion and biological activity. IL-18, which was originally described as IGIF (IFN- $\gamma$ -inducing factor), IL-18 is induced in mouse liver subsequent to challenge with lipopolysaccharide (LPS). IL-18 binding protein (IL-18BP) functions as an inhibitor of the early Th1 response by binding to IL-18 and inhibiting IFN- $\gamma$  production. IL-18BP is a member of the immunoglobulin superfamily and shares some homology to IL-1RII.

## REFERENCES

1. Nakamura, K., Okamura, H., Nagata, K., Komatsu, T. and Tamura, T. 1993. Purification of a factor which provides a costimulatory signal for  $\gamma$ -interferon production. *Infect. Immun.* 61: 64-70.
2. Dinarello, C.A. 1994. The interleukin-1 family: 10 years of discovery. *FASEB J.* 8: 1314-1325.
3. Okamura, H., Tsutsi, H., Komatsu, T., Yutsudo, M., Hakura, A., Tanimoto, T., Torigoe, K., Okura, T., Nukada, Y. and Hattori, K. 1995. Cloning of a new cytokine that induces IFN- $\gamma$  production by T cells. *Nature* 378: 88-91.
4. Bazan, J.F., Timans, J.C. and Kastelein, R.A. 1996. A newly defined interleukin-1? *Nature* 379: 591.
5. Dinarello, C.A., Novick, D., Puren, A.J., Fantuzzi, G., Shapiro, L., Muhl, H., Yoon, D.Y., Reznikov, L.L., Kim, S.H. and Rubinstein, M. 1998. Overview of interleukin-18: more than an interferon- $\gamma$  inducing factor. *J. Leukoc. Biol.* 63: 658-664.
6. Novick, D., Kim, S.H., Fantuzzi, G., Reznikov, L.L., Dinarello, C.A. and Rubinstein, M. 1999. Interleukin-18 binding protein: a novel modulator of the Th1 cytokine response. *Immunity* 10: 127-136.

## CHROMOSOMAL LOCATION

Genetic locus: IL18BP (human) mapping to 11q13.4; Il18bp (mouse) mapping to 7 E3.

## SOURCE

IL-18BP (PL-B12) is a mouse monoclonal antibody raised against a recombinant protein mapping within amino acids 31-194, representing full-length IL-18BP protein of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

IL-18BP (PL-B12) is recommended for detection of IL-18BP of mouse, rat and 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IL-18BP siRNA (h): sc-105566, IL-18BP siRNA (m): sc-77389, IL-18BP shRNA Plasmid (h): sc-105566-SH, IL-18BP shRNA Plasmid (m): sc-77389-SH, IL-18BP shRNA (h) Lentiviral Particles: sc-105566-V and IL-18BP shRNA (m) Lentiviral Particles: sc-77389-V.

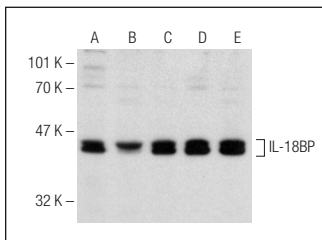
Molecular Weight of glycosylated IL-18BP isoforms: 35-45 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa whole cell lysate: sc-2200 or MCF7 whole cell lysate: sc-2206.

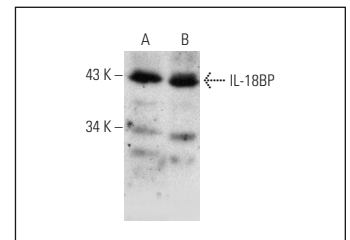
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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).

## DATA



IL-18BP (PL-B12): sc-134364. Western blot analysis of IL-18BP expression in K-562 (A), MCF7 (B), HeLa (C), U-698-M (D) and IFN $\gamma$  treated HeLa (E) whole cell lysates.



IL-18BP (PL-B12): sc-134364. Western blot analysis of IL-18BP expression in HeLa (A) and CCRF-CEM (B) whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

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