

MONOCLONAL ANTIBODY

Anti-IL-18 (Human) mAb-Biotin

Code No.	Clone	Subclass	Quantity	Concentration
D045-6	159-12B	Rat IgG2a	50 µL	500 µg/mL

BACKGROUND: Interleukin 18 (IL-18) is a 18 kDa cytokine which identified as a costimulatory factor for production of interferon- γ (IFN- γ) in response to toxic shock and shares functional similarities with IL-12. IL-18 is synthesized as a precursor 24 kDa molecule without a signal peptide and must be cleaved to produce an active molecule. IL-1 converting enzyme (ICE, Caspase-1) cleaves pro-IL-18 at aspartic acid in the P1 position, producing the mature, bioactive peptide that is readily released from the cells. It is reported that IL-18 is produced from Kupffer cells, activated macrophages, keratinocytes, intestinal epithelial cells, osteoblasts, adrenal cortex cells and murine diencephalon. IFN- γ is produced by activated T or NK cells and plays critical roles in the defense against microbial pathogens. IFN- γ activates macrophages, enhances NK activity and B cell maturation, proliferation and Ig secretion, induces MHC class I and II antigens, and inhibits osteoclast activation. IL-18 acts on T helper type-1 (Th1) T cells and in combination with IL-12 strongly induces them to produce IFN- γ . Pleiotropic effects of IL-18 has also been reported, such as, enhancement production of IFN- γ and GM-CSF in peripheral blood mononuclear cells, production of Th1 cytokines, IL-2, GM-CSF and IFN- γ in T cells, enhancement of Fas ligand expression by Th1 cells.

SOURCE: This antibody was purified from hybridoma (clone 159-12B) supernatant using protein G agarose. This hybridoma was established by fusion of mouse myeloma cell SP2/0 with SD rat splenocyte immunized with recombinant human IL-18.

FORMULATION: 25 µg IgG in 50 µL volume of PBS containing 1% BSA and 0.09% NaN₃*.

*Azide may react with copper or lead in plumbing system to form explosive metal azides. Therefore, always flush plenty of water when disposing materials containing azide into drain.

STORAGE: This antibody solution is stable for one year from the date of purchase when stored at 4°C.

REACTIVITY: This antibody reacts with human IL-18 on ELISA.

INTENDED USE:

For Research Use Only. Not for use in diagnostic procedures.

APPLICATIONS:

Western blotting; Not tested
Immunoprecipitation; Not tested
Immunocytochemistry; Not tested
Immunohistochemistry; Not tested
Flow Cytometry; Not tested
ELISA; 1:1,000

Suggested paired clone for ELISA is 125-2H (MBL; code no. D044-3).

SPECIES CROSS REACTIVITY:

Species	Human	Mouse	Rat
Samples	Recombinant	Recombinant	Not tested
Reactivity	+	-	

REFERENCES:

- 1) Okano, M., *et al.*, *Int. Arch. Allergy Immunol.* **160**, 275-286 (2013) [ELISA]
- 2) Bontkes, H. J., *et al.*, *Clin. Immunol.* **127**, 375-394 (2008) [ELISA]
- 3) Leach, S. T., *et al.*, *Inflamm. Bowel Dis.* **14**, 68-74 (2008) [ELISA]
- 4) McCurnin, D., *et al.*, *Pediatrics* **121**, 945-956 (2008)
- 5) Haveman, L. M., *et al.*, *Int. Immunol.* **18**, 1521-1529 (2006)
- 6) Giavedoni, L. D., *J. Immunol. Methods* **301**, 89-101 (2005) [ELISA]
- 7) Shigehara, K., *et al.*, *J. Immunol.* **166**, 642-649 (2001)
- 8) Dao, T., *et al.*, *Cell Immunol.* **173**, 230-235 (1996)
- 9) Micallef, M., *et al.*, *Eur. J. Immunol.* **26**, 1647-1651 (1996)
- 10) Ushio, S., *et al.*, *J. Immunol.* **156**, 4274-4279 (1996)
- 11) Okamura, H., *et al.*, *Nature* **378**, 88-91 (1995)

RELATED PRODUCTS:

Please visit our website at <https://ruo.mbl.co.jp/>.

250624-7