MBL International Corporation

MONOCLONAL ANTIBODY

Biotin Labeled Anti-Mouse IL-18

Code No.	Clone	Subclass	Quantity	Form
D048-6	93-10C	Rat IgG1	50 µg	Purified IgG

BACKGROUND: Interleukin 18 (IL-18) is a 18 kDa cytokine, which identified as a co-stimulatory 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 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 form the cells. It is reported that IL-18 is produced form 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 microviral 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) 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 93-10C) supernatant using protein G agarose. This hybridoma was established by fusion of mouse myeloma cell SP2/0 with SD rat splenocyte immunized with recombinant mouse IL-18.

FORMULATION: In 50 µL PBS containing 1% BSA, 10% glycerol and 0.09% NaN_3, pH 7.2.

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

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

APPLICATIONS:

Immunoprecipitation; Not tested. Unconjugated form has been used successfully at 5 µg Ab/0.5 µg rMouse IL-18

ELISA; dilute 1:2,000.

*Suggested paired clone for ELISA is clone 74 (Code no. D047-3).

Detailed procedure is provided in the following **PROTOCOLS**.

SPECIES CROSS REACTIVITY:

Species	Human	Mouse	Rat
Other	Not Tested	recombinant	Not Tested
Reactivity on FCM		+	

INTENDED USE:

For research use only. Not for clinical diagnosis.

REFERENCES:

1) Dao T., *et al., Cell Immunol.* **173**, 230-235 (1996)
2) Micallef. M., *et al*., *Eur. J. Immunol*. **26**, 1647-1651 (1996)
3) Ushio. S., *et al*., *J. Immunol*. **156**, 4274-4279 (1996)
4) Okamura. H., *et al*., *Nature* **378**, 88-91 (1995)

RELATED PRODUCTS:

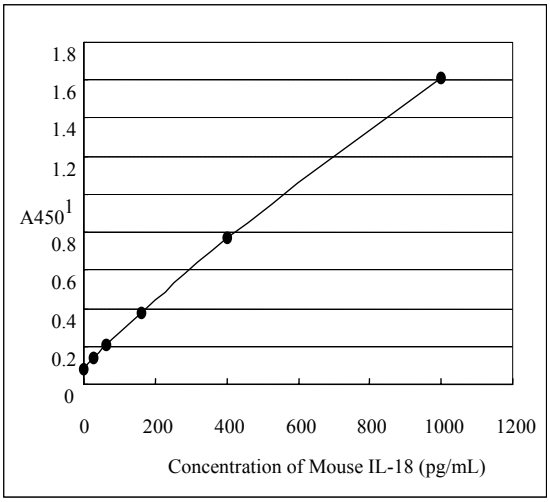
D046-3 Anti-mouse IL-18 (39-3F)
D047-3 Anti-mouse IL-18 (74)
D048-3 Anti-mouse IL-18 (93-10C)
7625 Murine IL-18 ELISA

PROTOCOL:

ELISA

1) Wash the anti-mouse IL-18 monoclonal antibody (Code No. D047-3, clone 74) coated plates 1 times with 200 µL/well of PBS-T (0.05% Tween-20 in PBS).
2) Distribute 100 µL/well of the recombinant mouse IL-18 standard (0, 25.6, 64, 160, 400, 1,000 pg/mL) to each well.
3) Incubate for 1 hour at room temperature.
4) Wash the plates 4 times with 200 µL/well of PBS-T.
5) Distribute 100 µL/well of the 1:2,000 Biotin-labeled anti-mouse IL-18 monoclonal antibody (clone 93-10C) diluted in PBS to each well.
6) Incubate for 1 hour at room temperature.
7) Wash the plates 4 times with 200 µL/well of PBS-T.
8) Distribute 100 µL/well of the HRP-conjugated streptavidin (MBL; code no. IM-0309) (20 ng/mL) to each well.
9) Incubate for 1 hour at room temperature.
10) Wash the plates 4 times with 200 µL/well of PBS-T.
11) Distribute 100 µL/well of the substrate solution (tetramethyl benzidine solution)

12) Incubate for 15 minutes at room temperature.
13) Distribute 100 µL/well of 1N H_2SO_4 to each well and stop enzyme reaction.
14) After gentle mixing, determine the absorbance at 450/620 nm of each well by a spectrophotometer.



Mouse IL -18 ELISA analysis. *Dispense the recombinant mouse IL -18 in the plates which are coated with the capture antibody (D047-3). Then detect mouse IL - 18 with the biotinylated antibody (D048-6).*

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