

Technical Data Sheet

Purified NA/LE Rat Anti-Mouse IL-18 Receptor β

Product Information

Material Number:	552422
Alternate Name:	IL-1RAcPL, IL-R7
Size:	0.5 mg
Concentration:	1.0 mg/ml
Clone:	TC30-28E3
Immunogen:	Mouse sIL-1R7 fusion protein
Isotype:	Rat IgG2a, λ
Reactivity:	QC Testing: Mouse
Storage Buffer:	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2 μ m sterile filtered. Endotoxin level is ≤ 0.01 EU/ μ g (≤ 0.001 ng/ μ g) of protein as determined by the LAL assay.

Description

The TC30-28E3 antibody specifically binds to the β subunit of the mouse Interleukin-18 Receptor complex (IL-18R β). The mouse IL-18R complex is expressed by T cells stimulated with IL-12 alone or cultured with antigen and IL-12 to induce Th1 cells. IL-18R is constitutively expressed by NK cells. Resting mouse T cells and Th2 cells do not express detectable levels of IL-18R. The mouse IL-18R complex consists of the IL-18 α chain, also known as IL-1 Receptor related protein 1 (IL-1Rrp1 or IL-R5) and the IL-18R β chain also known as IL-1R accessory protein-like (IL-1RAcPL or IL-R7). The cell surface IL-18 α chain binds IL-18 with low affinity. However its interaction with the IL-18R β chain confers high affinity binding for the ligand. The IL-18R β chain is not involved in ligand binding but is responsible for the transduction of biological signals. The immunogen used to generate the TC30-28E3 hybridoma was sIL-1R7 fusion protein.

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

Application Notes

Application

Neutralization	Routinely Tested
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Neutralization Activity:

Purified NA/LE Rat Anti-Mouse IL-18 Receptor β (Cat. No. 552422) may be used for neutralization, such as the neutralization of 50 pg/mL recombinant mouse IL-18 mediated proliferation of 1×10^5 cells/well of 2D6 indicator cells.

Activity Range:

50% Neutralization (ND50) at 0.2 – 10 μ g/mL

$\geq 70\%$ Neutralization at 10 – 100 μ g/mL

Suggested Companion Products

Catalog Number	Name	Size	Clone
554687	Purified NA/LE Rat IgG2a κ Isotype Control	0.5 mg	R35-95

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Born TL, Thomassen E, Bird TA, Sims JE. Cloning of a novel receptor subunit, AcPL, required for interleukin-18 signaling. *J Biol Chem*. 1998; 273(45):29445-29450. (Biology)

Debets R, Timans JC, Churakowa T, Zurawski S, de Waal Malefyt R, Moore KW, Abrams JS, O'Garra A, Bazan JF, Kastelein RA. IL-18 receptors, their role in ligand binding and function: anti-IL-1RAcPL antibody, a potent antagonist of IL-18. *J Immunol*. 2000; 165(9):4950-4956. (Clone-specific)

Hoshino K, Tsutsui H, Kawai T, Takeda K, Nakanishi K, Takeda Y, Akira S. Cutting edge: generation of IL-18 receptor-deficient mice: evidence for IL-1 receptor-related protein as an essential IL-18 binding receptor. *J Immunol*. 1999; 162(9):5041-5044. (Biology)

Hyodo Y, Matsui K, Hayashi N, Tsutsui H, Kashiwamura S, Yamauchi H, Hiroishi K, Takeda K, Tagawa Y, Iwakura Y, Kayagaki N, Kurimoto M, Okamura H, Hada. IL-18 up-regulates perforin-mediated NK activity without increasing perforin messenger RNA expression by binding to constitutively expressed IL-18 receptor. *J Immunol*. 1999; 162(3):1662-1668. (Biology)

Maruo S, Ahn HJ, Yu WG, Tomura M, Wysocka M, Yamamoto N, Kobayashi M, Hamaoka T, Trinchieri G, Fujiwara H. Establishment of an IL-12-responsive T cell clone: its characterization and utilization in the quantitation of IL-12 activity. *J Leukoc Biol*. 1997; 61(3):346-352. (Biology)

Neumann D, Martin MU. Interleukin-12 upregulates the IL-18R β chain in BALB/c thymocytes. *J Interferon Cytokine Res*. 2001; 21(8):635-642. (Biology)

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Tomura M, Maruo S, Mu J, Zhou XY, Ahn HJ, Hamaoka T, Okamura H, Nakanishi K, Clark S, Kurimoto M, Fujiwara H. Differential capacities of CD4+, CD8+, and CD4-CD8- T cell subsets to express IL-18 receptor and produce IFN-gamma in response to IL-18. *J Immunol.* 1998; 160(8):3759-3765. (Biology)

Xu D, Chan WL, Leung BP, Hunter D, Schulz K, Carter RW, McInnes IB, Robinson JH, Liew FY. Selective expression and functions of interleukin 18 receptor on T helper (Th) type 1 but not Th2 cells. *J Exp Med.* 1998; 188(8):1485-1492. (Biology)

Yoshimoto T, Takeda K, Tanaka T, Ohkusu K, Kashiwamura S, Okamura H, Akira S, Nakanishi K. IL-12 up-regulates IL-18 receptor expression on T cells, Th1 cells, and B cells: synergism with IL-18 for IFN-gamma production. *J Immunol.* 1998; 161(7):3400-3407. (Biology)

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