

PRODUCT INFORMATION



Interleukin-12R β 2 Rabbit Monoclonal Antibody (Clone 093)

Item No. 38091

Overview and Properties

Contents:	This vial contains 50 or 100 μ l of protein A-affinity purified monoclonal antibody.
Synonyms:	Interleukin-12R Subunit β 2, Interleukin-12 Receptor Subunit β 2
Immunogen:	Recombinant mouse IL-12R β 2
Cross Reactivity:	(+) IL-12R β 2
Species Reactivity:	(+) Mouse; other species not tested
Form:	Liquid
Storage:	-80°C (as supplied)
Stability:	\geq 1 year
Storage Buffer:	0.2 μ m filtered solution in PBS
Clone:	093
Host:	Rabbit
Isotype:	IgG
Application:	ELISA; the recommended starting dilution is 1:5,000-1:10,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Description

Interleukin-12R β 2 (IL-12R β 2) is a type I cytokine receptor that is involved in immunity.¹ It is composed of an N-terminal immunoglobulin-like (Ig-like) domain, five fibronectin type III domains, which facilitate cytokine binding, a transmembrane domain, and an intracellular domain that contains tyrosine phosphorylation motifs. IL-12R β 2 is selectively expressed in T helper 1 (Th1) over Th2 cells.² IL-12R β 2 forms a heterodimer with IL-12R β 1 to form the IL-12R, and forms a homodimer or heterodimers with gp130 or IL-27R α to form receptors for IL-35, which all primarily act through the JAK/STAT pathway.³ It is the functional receptor for IL-12, as Th2 cells that express IL-12R β 1 are unresponsive to IL-12 stimulation. Knockout of *Il12rb2* (*Il12rb2*^{-/-}) prevents increases in serum IFN- γ levels in IL-12- or LPS-stimulated mice.⁴ *Il12rb2*^{-/-} mice exhibit increased disease severity in a model of relapse-remitting experimental autoimmune encephalomyelitis.⁵ SNPs in *IL12RB2* are associated with chronic obstructive pulmonary disease (COPD).⁶ Cayman's Interleukin-12R β 2 Rabbit Monoclonal Antibody (Clone 093) can be used for ELISA.

References

1. Jones, L.L. and Vignali, D.A.A. Molecular interactions within the IL-6/IL-12 cytokine/receptor superfamily. *Immunol. Res.* **51(1)**, 5-14 (2011).
2. Szabo, S.J., Dighe, A.S., Gubler, U., *et al.* Regulation of the interleukin (IL)-12R β 2 subunit expression in developing T helper 1 (Th1) and Th2 cells. *J. Exp. Med.* **185(5)**, 817-824 (1997).
3. Zhang, J., Zhang, Y., Wang, Q., *et al.* Interleukin-35 in immune-related diseases: Protection or destruction. *Immunology* **157(1)**, 13-20 (2019).
4. Wu, C.-Y., Wang, X., Gadina, M., *et al.* IL-12 receptor β 2 (IL-12R β 2)-deficient mice are defective in IL-12-mediated signaling despite the presence of high affinity IL-12 binding sites. *J. Immunol.* **165(11)**, 6221-6228 (2000).
5. Xie, C., Ciric, B., Yu, S., *et al.* IL-12R β 2 has a protective role in relapsing-remitting experimental autoimmune encephalomyelitis. *J. Neuroimmunol.* **291**, 59-69 (2016).
6. Fu, Y., Liu, L., and Wu, H. Role of genetic polymorphisms in IL12R β 2 in chronic obstructive pulmonary disease. *Int. J. Chron. Obstruct. Pulmon. Dis.* **17**, 1671-1683 (2022).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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