



# Rat Anti-Mouse IL-12 p40 Monoclonal antibody, clone C17.8 (CABT-L4331)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

### Product Overview

The C17.8 antibody reacts with mouse p40 also known as IL-12 $\beta$ . p40 is a 40 kDa subunit of IL-12 and IL-23. IL-12 is a heterodimeric cytokine composed of subunits IL-12 $\alpha$  p35 and IL-12 $\beta$  p40. The p40 subunit of IL-12 also combines with p19, a protein that shows no biological activity by itself, to form IL-23. IL-12 is secreted by activated monocytes, macrophages, and dendritic cells while IL-23 is secreted by activated dendritic cells and epithelial cells. IL-12 plays roles in T lymphocyte differentiation, IFN $\gamma$  production, and NK cell cytotoxicity. The C17.8 antibody has been shown to neutralize both IL-12 and IL-23 bioactivity.

<b>Target</b>	Mouse IL-12 p40
<b>Immunogen</b>	Recombinant mouse IL-12 p70
<b>Isotype</b>	IgG2a, $\kappa$
<b>Source/Host</b>	Rat
<b>Species Reactivity</b>	Mouse
<b>Clone</b>	C17.8
<b>Purification</b>	Protein G purified. Purity>95%. Determined by SDS-PAGE
<b>Conjugate</b>	Functional Grade
<b>Applications</b>	in vivo IL-12p40 neutralization, p40 affinity chromatography, IP, ELISA, FC, WB
<b>Molecular Weight</b>	150 kDa
<b>Format</b>	0.2 $\mu$ M filtered liquid. Purified from tissue culture supernatant in an animal free facility

<b>Concentration</b>	Lot specific
<b>Size</b>	5 mg
<b>Buffer</b>	PBS, pH 7.0. Contains no stabilizers or preservatives. [low endotoxin azide-free]  Endotoxin level: <1EU/mg (<0.001EU/µg). Determined by LAL gel clotting assay Related dilution buffer: CABT-LB04
<b>Preservative</b>	None
<b>Storage</b>	The antibody solution should be stored undiluted at 4°C, and protected from prolonged exposure to light. Do not freeze.
<b>Ship</b>	Wet ice

## BACKGROUND

<b>Introduction</b>	This gene encodes a subunit of interleukin 12, a cytokine that acts on T and natural killer cells, and has a broad array of biological activities. Interleukin 12 is a disulfide-linked heterodimer composed of the 40 kD cytokine receptor like subunit encoded by this gene, and a 35 kD subunit encoded by IL12A. This cytokine is expressed by activated macrophages that serve as an essential inducer of Th1 cells development. This cytokine has been found to be important for sustaining a sufficient number of memory/effector Th1 cells to mediate long-term protection to an intracellular pathogen. Overexpression of this gene was observed in the central nervous system of patients with multiple sclerosis (MS), suggesting a role of this cytokine in the pathogenesis of the disease. The promoter polymorphism of this gene has been reported to be associated with the severity of atopic and non-atopic asthma in children. [provided by RefSeq, Jul 2008]
<b>Keywords</b>	IL12B; interleukin 12b; p40; IL-12b; IL12p40; IL-12p40; interleukin-12 subunit beta; CLMF p40; IL-12 p40; IL-12 subunit p40; IL-23 subunit p40; cytotoxic lymphocyte maturation factor 40 kDa subunit;

## GENE INFORMATION

<b>Official Symbol</b>	Marmoset interleukin 12B
<b>Synonyms</b>	IL12B; interleukin 12b; p40; IL-12b; IL12p40; IL-12p40; interleukin-12 subunit beta; CLMF p40; IL-12 p40; IL-12 subunit p40; IL-23 subunit p40; cytotoxic lymphocyte maturation factor 40 kDa subunit;
<b>References</b>	Dann, S. M., et al. (2018). "Giardia Infection of the Small Intestine Induces Chronic Colitis in Genetically Susceptible Hosts." <i>J Immunol</i> 201(2): 548-559. PubMed; Gwyer Findlay, E., et al. (2013). "IL-27 receptor signaling regulates CD4+ T cell chemotactic responses during

infection." *J Immunol* 190(9): 4553-4561. PubMed; Villegas-Mendez, A., et al. (2013). "IL-27 receptor signalling restricts the formation of pathogenic, terminally differentiated Th1 cells during malaria infection by repressing IL-12 dependent signals." *PLoS Pathog* 9(4): e1003293. PubMed; Yu, X., et al. (2013). "A multifunctional chimeric chaperone serves as a novel immune modulator inducing therapeutic antitumor immunity." *Cancer Res* 73(7): 2093-2103. PubMed; Mack, E. A., et al. (2011). "Type 1 interferon induction of natural killer cell gamma interferon production for defense during lymphocytic choriomeningitis virus infection." *MBio* 2(4). PubMed

---