

Biotin anti-mouse IL-12/IL-23 p40 (monomer, dimer, heterodimer) Antibody

Catalog# / Size	505301 / 50 µg 505302 / 500 µg
Clone	C17.8
Regulatory Status	RUO
Other Names	Interleukin-12 p40, Interleukin-23 p40, Cytotoxic lymphocyte maturation factor (CLMF), Natural killer cell stimulatory factor (NKSF), CTL maturation factor (TcMF), T-cell stimulating factor (TSF)
Isotype	Rat IgG2a, κ
Description	The C17.8 antibody reacts with mouse IL-12 p40 subunit of the IL-12 p70 heterodimer and IL-23 p40 subunit of the IL-23 p19/p40, as well as p40 monomer and homodimer. The C17.8 antibody can neutralize the bioactivity of natural or recombinant IL-12.

Product Details

Verified Reactivity	Mouse, IL-12/IL-23 p40 subunit (monomer, homodimer and heterodimer IL-12 p35/p40 or IL-23 p19/p40)
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	CHO expressed, recombinant mouse IL-12 p70
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. Do not freeze.
Application	ELISA Detection , ELISPOT Detection , ICFC
Recommended Usage	Each lot of this antibody is quality control tested by ELISA assay . For use as an ELISA detection antibody, a concentration range of 0.25-1.0 µg/ml is recommended. For use as an ELISPOT detection antibody, a concentration range of 0.5-2.0 µg/ml is recommended. To obtain a linear standard curve, serial dilutions of IL-12 recombinant protein ranging from 250 to 2 pg/ml are recommended for each ELISA plate. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	<p>ELISA Detection^{1,2,6-9} or ELISPOT Detection: The biotinylated C17.8 antibody is useful as a detection antibody for a sandwich ELISA or ELISPOT assay, when used in conjunction with the purified C15.6 antibody (Cat. No. 505202/505208) as capture antibody and recombinant mouse IL-12/IL-23 p40 (Cat. No. 576909) or recombinant mouse IL-12 p70 (Cat. No. 577009) as the standard.</p> <p>Neutralization^{1,2,4,5,6,10}: The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for neutralization of mouse IL-12 bioactivity <i>in vivo</i> and <i>in vitro</i> (Cat. No. 505304). For <i>in vivo</i> studies or highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 505308) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/µg).</p> <p>Additional reported applications (for relevant formats of this clone) include: Western blotting³, immunoprecipitation³, and intracellular immunofluorescent staining and flow cytometric analysis.</p> <p>Note: For testing mouse IL-12 p40 (monomer, dimer, heterodimer) in serum or plasma, BioLegend's ELISA Max™ Sets (Cat. No. 431601 to 431606) are specially developed and recommended.</p>

Application References

1. Kitagaki K, *et al.* 2002. *Clin. Diagn. Lab Immunol.* 9:1260.
2. Reichmann G, *et al.* 1999. *J. Immunol.* 163:3354.

3. Wysocka M, *et al.* 1995. *Eur. J. Immunol.* 25:672.
4. Neucath M, *et al.* 1995. *J. Exp. Med.* 182:1281.
5. Cousens LP, *et al.* 1999 *J. Exp. Med.* 189:1315.
6. Gately M. 1995. *Curr. Prot. Immunol.* John Wiley and Sons, New York. Unit 6.16.
7. O'Connell PJ, *et al.* 2006. *Blood* 107:1010.
8. Dzhagalov I, *et al.* 2007. *J. Immunol.* 178:2113.
9. Xu G, *et al.* 2007. *J. Immunol.* 179:5358. [PubMed](#)
10. Sugimoto K, *et al.* 2007. *Gastroenterology* 133:124. [PubMed](#)

Product Citations

1. Volpedo G, *et al.* 2022. *NPJ Vaccines.* 7:32. [PubMed](#)
2. Liang D, *et al.* 2018. *Front Immunol.* 8:1801. [PubMed](#)
3. Bourquin C, *et al.* 2009. *J Immunol.* 183:6078. [PubMed](#)
4. Zhao L, *et al.* 2021. *STAR Protocols.* 2(3):100732. [PubMed](#)
5. Yan H, *et al.* 2019. *Sci Rep.* 9:10447. [PubMed](#)
6. Luo X, *et al.* 2021. *Neuron.* 109(17):2691-2706.e5. [PubMed](#)

RRID

AB_315373 (BioLegend Cat. No. 505301)
 AB_315374 (BioLegend Cat. No. 505302)

Antigen Details

Structure	Cytokine; monomer, heterodimer (p40:p35 or p40:p19) or homodimer (p40:p40)
Bioactivity	IL-12 p70 (p40:p35) induces IFN- γ , TNF- α production in T and NK cells; costimulation of PBL proliferation; proliferation/differentiation of T _H 1 T lymphocytes. IL-23 (p40:p19) induces proliferation and production of IFN- γ by human me
Cell Sources	Dendritic cells, monocytes/macrophages, B cells, T cells
Cell Targets	T cells, NK cells
Receptors	IL-12R β 1 binds p40; dimeric with IL-12R β 2 binds p35
Biology Area	Immunology, Innate Immunity
Molecular Family	Cytokines/Chemokines
Antigen References	<ol style="list-style-type: none"> 1. Fitzgerald K, <i>et al.</i> Eds. 2001. <i>The Cytokine FactsBook.</i> Academic Press, San Diego. 2. Quesniaux V. 1992. <i>Research Immunol.</i> 143:385. 3. Trinchieri G, <i>et al.</i> 1992 <i>Prog. Growth Factor Res.</i> 4:355. 4. Trinchieri G, <i>et al.</i> 1993 <i>Immunol. Today.</i> 14:335. 5. Oppmann B, <i>et al.</i> 2000 <i>Immunity.</i> 13:715. 6. Aggarwal S, <i>et al.</i> 2003 <i>J. Biol. Chem.</i> 278:1910. 7. Parham C, <i>et al.</i> 2002 <i>J. Immunol.</i> 168:5699. 8. Belladonna ML, <i>et al.</i> 2002 <i>J. Immunol.</i> 168:5448. 9. Lankford CS, <i>et al.</i> 2003 <i>J. Leukoc. Biol.</i> 73:49.
Regulation	Downregulated by IL-10; homodimeric p40 antagonistic to functional p70 heterodimer; p40 monomer has no function; p40 subunit in common with IL-23
Gene ID	16160

Related Protocols

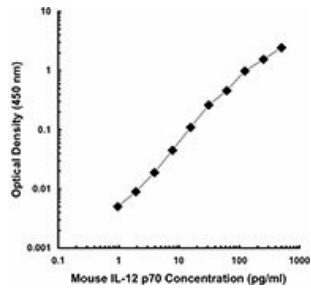
[Active Protocols: Sandwich ELISA - Video](#)

[Sandwich ELISA Protocol](#)

Other Formats

Biotin anti-mouse IL-12/IL-23 p40 (monomer, dimer, heterodimer), Ultra-LEAF™ Purified anti-mouse IL-12/IL-23 p40 (monomer, dimer, heterodimer)

Product Data



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