Purified anti-IL-12/IL-23 p40 Antibody

Catalog# / Size	692502 / 100 µg
Clone	A15076D
Regulatory Status	RUO
Other Names	IL-12 subunit p40, IL-23 subunit p40, Cytotoxic lymphocyte maturation factor, CLMF2, Natural killer cell stimulatory factor 40-KD subunit, NKSF2
Isotype	Mouse IgG2b, κ
Description	IL-12 and IL-23 share the p40 subunit, which heterodimerizes respectively with IL-12 p35 or IL-23 p19 subunits to form IL-12 or IL-23. IL-12 p40 exists as a monomer and as a homodimer (IL-12 p80). IL-12 acts as a growth factor for activated human T and NK cells, enhances the lytic activity of human NK cells, and stimulates the production of IFN-γ by resting human PBMC. IL-12R is formed by two chains, IL-12Rβ1 and IL-12Rβ2. IL-12Rβ1 is associated with the Janus kinase (Jak) Tyk2 and binds IL-12 p40; IL-12Rβ2 is associated with Jak2 and binds either the heterodimer or the p35 chain. Signaling through the IL-12 receptor complex induces phosphorylation, dimerization, and nuclear translocation of several signal transducers and activators of transcription (STAT) family members (STAT1, 3, 4, 5), but most of the biological responses to IL-12 have been attributed to STAT4. IL-12 has been shown to elicit anti-tumor activity in mice and humans. It is believed that the antitumor effects of IL-12 are mediated, at least in part, by indirect mechanisms. Induction of IFN-γ results in the upregulation of class I and class II MHC molecules, adhesion molecules (ICAM-1), nitric oxide production by antigen presenting cells (APC), and the production of additional cytokines, CXCL9 and 10, which in turn mediate angiostatic effects.

Product Details

Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Recombinant human IL-12.
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	WB - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by Western blotting. For Western blotting, the suggested use of this reagent is 0.25 - 2.0 µg per ml. It is recommended that the reagent be titrated for optimal performance for each application.
RRID	AB_2632765 (BioLegend Cat. No. 692502)

Antigen Details

Structure	328 amino acids with a predicted molecular weight of 40 kD.
Distribution	Secreted.
Function	p40 homodimer functions as a proinflammatory protein that enhances leukocyte accumulation in the skin, blunt Th1 immunity to *Plasmodium berghei*, and provides protective immunity toward mycobacterial infection. In addition, p40 homodimer induces macrophage chemotaxis independent of IL-12. Also, IL-12 p40 homodimer (p402) induces the expression of inducible nitric

	oxide synthase (iNOS) in microglia.
Interaction	Heterodimer with IL12A and IL23A.
Ligand/Receptor	IL-12Rβ1.
Biology Area	Cell Adhesion, Cell Biology, Immunology, Signal Transduction
Molecular Family	Cytokines/Chemokines
Antigen References	1. Schoenhaut DS, *et al.* 1992. *J. Immunol.* 148:3433. 2. Manetti R, *et al.* 1994. *J. Exp. Med.* 179:1273. 3. Ireland D, *et al.* 2005. *Viral Immunol.* 18:397. 4. Moreno SE, *et al.* 2006. *J. Immunol.* 177:3218. 5. Lyakh L, *et al.* 2008. *Immunol. Rev.* 226:112. 6. Theiner G, *et al.* 2008. *Mol. Immunol.* 45:244. 7. Zhu S, *et al.* 2010. *J. Immunol.* 184:2348.
Gene ID	3593

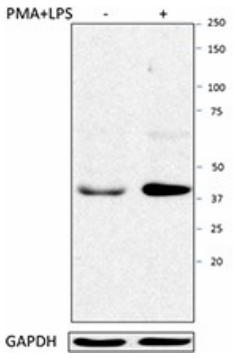
Related Protocols

Western Blotting Protocol

Other Formats

Purified anti-IL-12/IL-23 p40

Product Data



THP-1 cells were non-treated or treated with 100 ng/ml PMA for 3 days, and then treated with 1 µg/ml LPS for 1 day. Total protein extracts (15 µg protein) were resolved by 4-12% Bis-tris gel electrophoresis, transferred to nitrocellulose, and probed with 1 µg/mL purified anti-IL-12/IL-23 p40 (clone A15076D) antibody. Proteins were visualized using a goat anti-mouse-IgG secondary antibody conjugated to HRP and chemiluminescence detection. Purified anti-GAPDH (clone Poly6314) antibody was used as a loading control.

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