

IL-4 Monoclonal Antibody (BVD4-1D11)

Catalog Number

AMC0042

Product data sheet

Details		Species Reactivity	
Size	500 µg	Species reactivity	Mouse
Host/Isotope	Rat / IgG2b	Published species	Mouse, Not Applicable
Class	Monoclonal	Tested Applications	
Type	Antibody	ELISA (ELISA)	Dilution * Assay-dependent
Clone	BVD4-1D11	Flow Cytometry (Flow)	Assay-dependent
Immunogen	Recombinant mouse IL-4.	Neutralization (Neu)	Assay-dependent
Conjugate	Unconjugated	Published Applications	
Form	Liquid	Flow Cytometry (Flow)	See 2 publications below
Concentration	1 mg/mL	ELISA (ELISA)	See 7 publications below
Purification	purified	Miscellaneous PubMed (Misc)	See 2 publications below
Storage buffer	PBS	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Contains	no preservative		
Storage Conditions	-20°C		

Background/Target Information

Interleukin-4 (IL-4) is a pleiotropic, immune-modulatory cytokine produced by activated T cells, and serves as a ligand for interleukin 4 receptor. IL-4 has been found to have the broadest range of actions. The interleukin 4 receptor also binds to IL13, which may contribute to many overlapping functions of this cytokine and IL13. STAT6, a signal transducer and activator of transcription, has been shown to play an important role in mediating the immune regulatory signal of IL-4. The IL-4 gene, IL-3, IL-5, IL-13, and CSF2 form a cytokine gene cluster on chromosome 5q. In particular, IL-4 is located in close proximity to IL13 on the chromosome. Further, the IL-4 gene, IL13 and IL5 are found to be coordinated by several long-range regulatory elements over a 120 kilobase range on the chromosome. IL-4 delta 2 is a known splice variant of IL-4.

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PubMed References For IL-4 Monoclonal Antibody (BVD4-1D11)

2 Flow Cytometry References

Species / Dilution	Summary
	AMC0042 was used in Flow cytometry/Cell sorting to show that murine ex vivo splenic DCs are unresponsive to TSLP, as they fail to phosphorylate STAT5, but in vitro overnight culture, especially in presence of IL-4, renders DCs responsive to both TSLP and IL-7.
Mouse / Not Cited	Journal of immunology (Baltimore, Md. : 1950) (2017; 198: 3909) "IL-7R Expression Regulates Murine Dendritic Cell Sensitivity to Thymic Stromal Lymphopoietin." Author(s):Kummola L,Ortutay Z,Chen X,Caucheteux S,Hämäläinen S,Aittomäki S,Yagi R,Zhu J,Pesu M,Paul WE,Junttila IS PubMed Article URL: http://dx.doi.org/10.4049/jimmunol.1600753
Not Applicable / Not Cited	AMC0042 was used in flow cytometry to examine the effects of the T helper type 1 and 2-cytokine environment on dendritic cell induction of natural killer T cell-mediated cytokine production Blood (2005; 106: 1685) "Negative feedback regulation of T helper type 1 (Th1)/Th2 cytokine balance via dendritic cell and natural killer T cell interactions." Author(s):Minami K,Yanagawa Y,Iwabuchi K,Shinohara N,Harabayashi T,Nonomura K,Onoé K PubMed Article URL: http://dx.doi.org/10.1182/blood-2004-12-4738

7 ELISA References

Species / Dilution	Summary
	AMC0042 was used in ELISA to examine the effect of prostaglandin E(2) on polarized cytokine production
Not Applicable / Not Cited	Methods in molecular biology (Clifton, N.J.) (2004; 249: 229) "Assay system for the effect of prostaglandin E(2) in the determination of polarized cytokine production." Author(s):Kuroda E,Yamashita U PubMed Article URL: http://dx.doi.org/10.1385/1-59259-667-3:229
Not Applicable / Not Cited	AMC0042 was used in ELISA to investigate how isolation stress exacerbates autoimmune disease in MRL/lpr mice Journal of neuroimmunology (2005; 158: 138) "Social isolation stress exacerbates autoimmune disease in MRL/lpr mice." Author(s):Chida Y,Sudo N,Kubo C PubMed Article URL: http://dx.doi.org/10.1016/j.jneuroim.2004.09.002
Mouse / Not Cited	AMC0042 was used in ELISA to elucidate the role of CD8(+) T cells in immunity to Chlamydia pneumoniae. Journal of immunology (Baltimore, Md. : 1950) (2002; 169: 2524) "Multiple Chlamydia pneumoniae antigens prime CD8+ Tc1 responses that inhibit intracellular growth of this vacuolar pathogen." Author(s):Wizel B,Starcher BC,Samten B,Chronos Z,Barnes PF,Dzuris J,Higashimoto Y,Appella E,Sette A PubMed Article URL: http://dx.doi.org/10.4049/jimmunol.169.5.2524
Not Applicable / Not Cited	AMC0042 was used in ELISA to study the mechanism of alternaria-mediated damage in airway epithelial cells PloS one (2012; 7:) "Alternaria-induced release of IL-18 from damaged airway epithelial cells: an NF-B dependent mechanism of Th2 differentiation?" Author(s):Murai H,Qi H,Choudhury B,Wild J,Dharajiya N,Vaidya S,Kalita A,Bacsi A,Corry D,Kurosky A,Brasier A,Boldogh I, Sur S PubMed Article URL: http://dx.doi.org/10.1371/journal.pone.0030280
Not Applicable / Not Cited	AMC0042 was used in ELISA to induce protective immunity against secondary hydatidosis and elucidate the mechanisms of protection Parasitology research (2005; 98: 54) "Humoral and cytokine response during protection of mice against secondary hydatidosis caused by Echinococcus granulosus." Author(s):Al-Qaoud KM,Abdel-Hafez SK PubMed Article URL: http://dx.doi.org/10.1007/s00436-005-0004-z
Not Applicable / Not Cited	AMC0042 was used in ELISA to determine the fate of autoreactive CD4+T cells in HNT-TCR x GFAP-HA double transgenic mice Journal of autoimmunity (2004; 22: 179) "A transgenic mouse model for T-cell ignorance of a glial autoantigen." Author(s):Cabarrocas J,Piaggio E,Zappulla JP,Desbois S,Mars LT,Lassmann H,Liblau RS PubMed Article URL: http://dx.doi.org/10.1016/j.jaut.2004.01.001

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AMC0042 was used in ELISA to test if complete neutralization of histamine by an arthropod-derived, high affinity histamine-binding protein prevents allergic asthma

Not Applicable / Not Cited

Journal of immunology (Baltimore, Md. : 1950) (2004; 173: 3281)
"Arthropod-derived histamine-binding protein prevents murine allergic asthma."
Author(s):Couillin I,Maillet I,Vargaftig BB,Jacobs M,Paesen GC,Nuttall PA,Lefort J,Moser R,Weston-Davies W,Ryffel B
PubMed Article URL:<http://dx.doi.org/10.4049/jimmunol.173.5.3281>

2 Miscellaneous PubMed References

Species / Dilution	Summary
	AMC0042 was used in flow cytometry to report that IL-4R/Stat6 signaling controls the final frequency of Th2 lymphocytes, but is not essential for Th2 cell development.
Mouse / Not Cited	Journal of immunology (Baltimore, Md. : 1950) (2000; 164: 3047) "Single cell analysis reveals that IL-4 receptor/Stat6 signaling is not required for the in vivo or in vitro development of CD4+ lymphocytes with a Th2 cytokine profile." Author(s):Jankovic D,Kullberg MC,Noben-Trauth N,Caspar P,Paul WE,Sher A PubMed Article URL: http://dx.doi.org/10.4049/jimmunol.164.6.3047
	AMC0042 was used in flow cytometry to study V alpha 14i NKT cells.
Mouse / Not Cited	Proceedings of the National Academy of Sciences of the United States of America (2003; 100: 8395) "Mouse V alpha 14i natural killer T cells are resistant to cytokine polarization in vivo." Author(s):Matsuda JL,Gapin L,Baron JL,Sidobre S,Stetson DB,Mohrs M,Locksley RM,Kronenberg M PubMed Article URL: http://dx.doi.org/10.1073/pnas.1332805100

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