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IL2 Antibody (Center) (Ascites)

Mouse Monoclonal Antibody (Mab)
Catalog # AM2117a

Product Information

Application	WB, E
Primary Accession	P60568
Other Accession	NP_000577.2
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Clone Names	627CT14.8.1
Calculated MW	17628
Antigen Region	50-77

Additional Information

Gene ID	3558
Other Names	Interleukin-2, IL-2, T-cell growth factor, TCGF, Aldesleukin, IL2
Target/Specificity	This IL2 antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 50-77 amino acids from the Central region of human IL2.
Dilution	WB~~1:100~1600 E~~Use at an assay dependent concentration.
Format	Mouse monoclonal antibody supplied in crude ascites with 0.09% (W/V) sodium azide.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	IL2 Antibody (Center) (Ascites) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	IL2
Function	Cytokine produced by activated CD4-positive helper T-cells and to a lesser extend activated CD8-positive T-cells and natural killer (NK) cells that plays pivotal roles in the immune response and tolerance (PubMed:6438535). Binds to a receptor complex composed of either the high-affinity trimeric IL-2R (IL2RA/CD25, IL2RB/CD122 and IL2RG/CD132) or the low-affinity dimeric IL-2R

(IL2RB and IL2RG) (PubMed:16293754, PubMed:16477002). Interaction with the receptor leads to oligomerization and conformation changes in the IL-2R subunits resulting in downstream signaling starting with phosphorylation of JAK1 and JAK3 (PubMed:7973659). In turn, JAK1 and JAK3 phosphorylate the receptor to form a docking site leading to the phosphorylation of several substrates including STAT5 (PubMed:8580378). This process leads to activation of several pathways including STAT, phosphoinositide-3-kinase/PI3K and mitogen-activated protein kinase/MAPK pathways (PubMed:25142963). Functions as a T-cell growth factor and can increase NK-cell cytolytic activity as well (PubMed:6608729). Promotes strong proliferation of activated B-cells and subsequently immunoglobulin production (PubMed:6438535). Plays a pivotal role in regulating the adaptive immune system by controlling the survival and proliferation of regulatory T-cells, which are required for the maintenance of immune tolerance. Moreover, participates in the differentiation and homeostasis of effector T-cell subsets, including Th1, Th2, Th17 as well as memory CD8-positive T-cells.

Cellular Location Secreted.

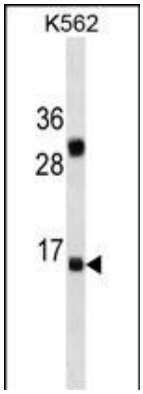
Background

The protein encoded by this gene is a secreted cytokine that is important for the proliferation of T and B lymphocytes. The receptor of this cytokine is a heterotrimeric protein complex whose gamma chain is also shared by interleukin 4 (IL4) and interleukin 7 (IL7). The expression of this gene in mature thymocytes is monoallelic, which represents an unusual regulatory mode for controlling the precise expression of a single gene. The targeted disruption of a similar gene in mice leads to ulcerative colitis-like disease, which suggests an essential role of this gene in the immune response to antigenic stimuli.

References

Zhu, P., et al. J. Immunol. 185(9):5140-5149(2010)
Muller, T., et al. Scand. J. Immunol. 72(4):365-371(2010)
Romero, R., et al. Am. J. Obstet. Gynecol. 203 (4), 361 (2010) :
Horowitz, A., et al. J. Immunol. 185(5):2808-2818(2010)
Wu, Z., et al. J Mol Cell Biol 2(4):217-222(2010)

Images



IL2 Antibody (Center)(Ascites)(Cat. #AM2117a) western blot analysis in K562 cell line lysates (35µg/lane).This demonstrates the IL2 antibody detected the IL2 protein (arrow).