

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

Clone Names 627CT14.8
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-3kinase/PI3K and mitogen-activated protein kinase/MAPK pathways (PubMed: <u>25142963</u>). 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:<u>6438535</u>). 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.

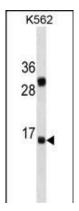
Background

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).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.