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IL-2 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1257a

Product Information

Application	WB, E
Primary Accession	P60568
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	8D5
Isotype	IgG1
Calculated MW	17628
Description	IL-2: interleukin-2. Entrez Protein NP_000577. It is a 17.6kDa 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.
Immunogen	Purified recombinant fragment of IL2 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	3558
Other Names	Interleukin-2, IL-2, T-cell growth factor, TCGF, Aldesleukin, IL2
Dilution	WB~~1/500 - 1/2000 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	IL-2 Antibody 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.

References

1. Leukemia. 2008 Dec;22(12):2201-7. 2. J Immunol. 2008 Feb 1;180(3):1490-8.

Images

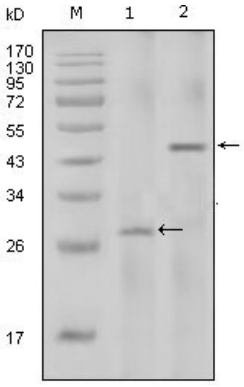


Figure 1: Western blot analysis using IL2 mouse mAb against full-length IL2 recombinant protein with Trx tag (1) and full-length IL2-hIgGFc transfected HEK293 cell lysate(2).

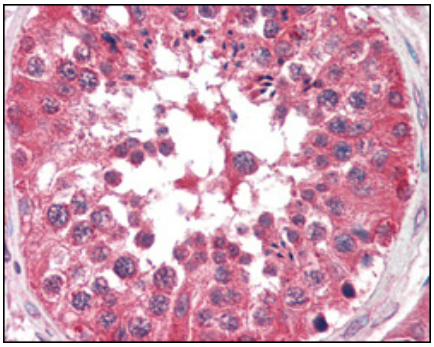
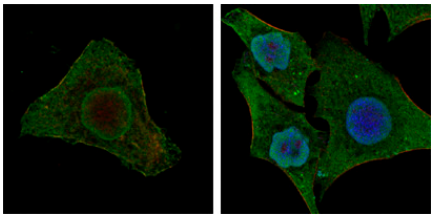


Figure 2: Immunohistochemical analysis of paraffin-embedded human testis tissues using BRAF mouse mAb.

Figure 3: Confocal immunofluorescence analysis of MCF-7



(left) and HepG2 (right) cells using anti-BRAF mAb (green). Red: Actin filaments have been labeled with DY-554 phalloidin. Blue: DRAQ5 fluorescent DNA dye

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