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IL-2 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1257a

Specification

IL-2 Antibody - Product Information

Application	**WB, IHC, IF**
Primary Accession	P60568
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**17.6kDa KDa**

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.

IL-2 Antibody - Additional Information

Gene ID 3558

Other Names
Interleukin-2, IL-2, T-cell growth factor, TCGF, Aldesleukin, IL2

Dilution
WB~~1/500 - 1/2000
IHC~~1:200~~1000
IF~~1:200~1000.

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.

IL-2 Antibody - 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.

IL-2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

IL-2 Antibody - Images

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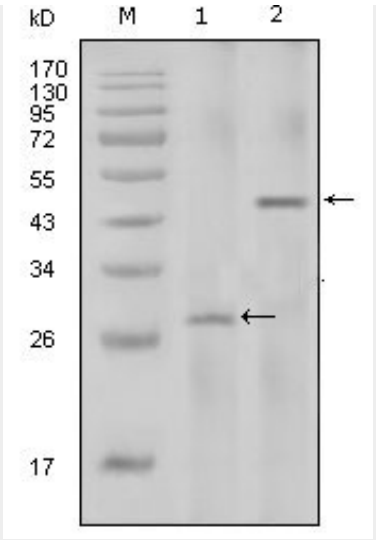

Figure 1: Western blot analysis using IL2 mouse mAb against full-length IL2 recombinant protein with Trx tag (1) and full-length IL2-hIgGFc transfected HEK293 cell lysate(2).

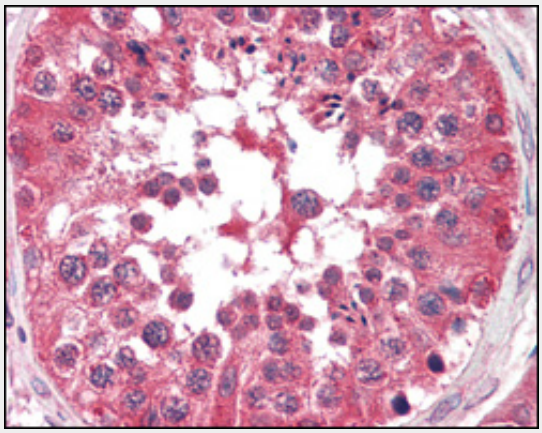

Figure 2: Immunohistochemical analysis of paraffin-embedded human testis tissues using BRAF mouse mAb.

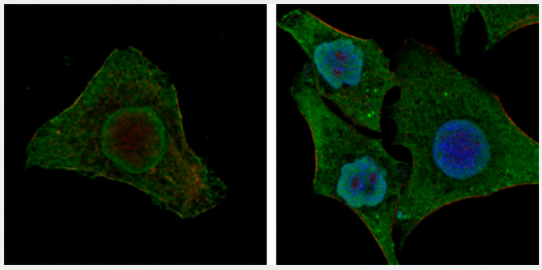

Figure 3: Confocal immunofluorescence analysis of MCF-7 (left) and HepG2 (right) cells using anti-BRAF mAb (green). Red: Actin filaments have been labeled with DY-554 phalloidin. Blue: DRAQ5 fluorescent DNA dye

IL-2 Antibody - References

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