CELL APPLICATIONS, INC.

IL-2 Antibody
Cat. No. CP10324

Applications: WB, IP
Detected MW: 18 kDa
Species & Reactivity: Human, Mouse, Rat
Isotype: Mouse IgG1

BACKGROUND

Interleukin-2 (IL-2) was identified based on its potent T-cell growth-factor activity and is traditionally implicated in the agonistic stimulation of immune responses. As IL-2 is mainly produced by activated T cells and, in particular, by activated CD4+ T-helper cells, at least part of their 'helper' function for CD8+ T cells was attributed to IL-2.[1] With respect to immune-enhancing functions, IL-2 has a role in supporting proliferation and survival of T cells, and differentiation of naive T cells into effector and memory cells. Evidence indicates that IL-2 is also an important factor that allows the generation of memory T cells, which are able to undergo secondary expansion when they re-encounter an antigen. Furthermore, IL-2 has the ability to overcome the proliferation block of anergic cells generated in vitro and, in certain situations, also *in vivo*.[2] In opposition to these immune-enhancing functions, IL-2 can promote activation-induced cell death (AICD) of T cells and was therefore implicated in downregulating antigen-specific T-cell numbers after the clonal expansion phase of an immune response.[3] Moreover, IL-2 also has anti-inflammatory properties, as do other pro-inflammatory cytokines, such as interferon-γ (IFNγ). In a similar process to IFNγ—which exerts anti-inflammatory properties by suppressing T-helper 17 cells—IL-2 can constrain IL-17 production, and exert its immunosuppressive function by stimulating the generation and homeostasis of CD4+ CD25+ Foxp3+ regulatory T cells (T_{REG}). Indeed, IL-2 is a non-redundant factor for the *in vivo* homeostasis of TREG, which constitute a fundamental part of immunological self-tolerance and immune regulation.[4]

References:
1. Malek, T.R.: Annu Rev Immunol. 26:453-79, 2008
2. Waldmann, T.A.: Nat Rev Immunol. 6:595-601, 2006
3. Bachmann, M.F. & Oxenius, A.: EMBO Rep. 8:1142-8, 2007
4. Turka, L.A. & Walsh, P.T.: Front Biosci. 13:1440-6, 2008

TECHNICAL INFORMATION

Source:
IL-2 antibody is a mouse monoclonal antibody raised against recombinant human IL-2 fragments expressed in *E. coli*.

Specificity and Sensitivity:
This antibody detects endogenous IL-2 proteins without cross-reactivity with other family members.
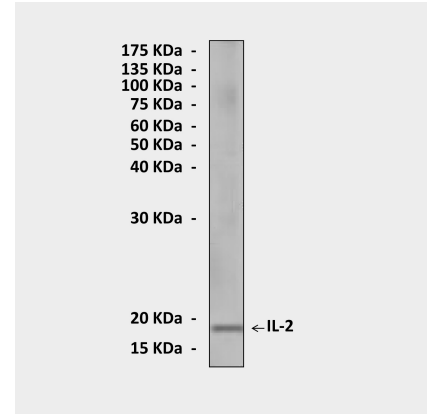
Storage Buffer: PBS and 30% glycerol

Storage:
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	1:50
IHC	n/d
ICC	n/d
FACS	n/d

Optimal dilutions must be determined by end user.

QUALITY CONTROL DATA

175 KDa -
135 KDa -
100 KDa -
75 KDa -
60 KDa -
50 KDa -
40 KDa -

30 KDa -

20 KDa - ←IL-2
15 KDa -

Western Blot detection of IL-2 proteins in *E. coli* cell lysate containing recombinant human IL-2 proteins using IL-2 Antibody.