Mouse IL-2 Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: BAF402

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IL-2 in ELISAs and Western blots. In western blots, less than 10% cross-reactivity with rhIL-2, rpIL-2 and rrIL-2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant mouse IL-2 (R&D Systems, Catalog # 402-ML) Ala21-Gln169 Accession # P04351
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse IL-2 (Catalog # 402-ML)
Mouse IL-2 Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Mouse IL-2 Antibody (Catalog # MAB702)
ELISA Detection	0.1-0.4 µg/mL	Mouse IL-2 Biotinylated Antibody (Catalog # BAF402)
Standard		Recombinant Mouse IL-2 (Catalog # 402-ML)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Interleukin-2 (IL-2) is a O-glycosylated four α-helix bundle cytokine that has potent stimulatory activity for antigen-activated T cells. It is expressed by $CD4^+$ and $CD8^+$ T cells, γδ T cells, B cells, dendritic cells, and eosinophils (1 - 3). Mature mouse IL-2 shares 56% and 73% aa sequence identity with human and rat IL-2, respectively. It shows strain-specific heterogeneity in an N-terminal region that contains a poly-glutamine stretch (4). Mouse and human IL-2 exhibit cross-species activity (5). The receptor for IL-2 consists of three subunits that are present on the cell surface in varying preformed complexes (6 - 8). The 55 kDa IL-2 Rα is specific for IL-2 and binds with low affinity. The 75 kDa IL-2 Rβ, which is also a component of the IL-15 receptor, binds IL-2 with intermediate affinity. The 64 kDa common gamma chain γc/IL-2 Rγ, which is shared with the receptors for IL-4, -7, -9, -15, and -21, does not independently interact with IL-2. Upon ligand binding, signal transduction is performed by both IL-2 Rβ and γc. IL-2 is best known for its autocrine and paracrine activity on T cells. It drives resting T cells to proliferate and induces IL-2 and IL-2 Rα synthesis (1, 2). It contributes to T cell homeostasis by promoting the Fas-induced death of naïve $CD4^+$ T cells but not activated $CD4^+$ memory lymphocytes (9). IL-2 plays a central role in the expansion and maintenance of regulatory T cells, although it inhibits the development of Th17 polarized cells (10 - 12). Thus, IL-2 may be a key cytokine in the natural suppression of autoimmunity (13, 14).

References:

1. Ma, A. *et al.* (2006) Annu. Rev. Immunol. **24**:657.
2. Gaffen, S.L. and K.D. Liu (2004) Cytokine **28**:109.
3. Kashima, N. *et al.* (1985) Nature **313**:402.
4. Matesanz, F. *et al.* (1993) Immunogenetics **38**:300.
5. Mosmann, T.R. *et al.* (1987) J. Immunol. **138**:1813.
6. Liparoto, S.F. *et al.* (2002) Biochemistry **41**:2543.
7. Wang, X. *et al.* (2005) Science **310**:1159.
8. Bodnar, A. *et al.* (2008) Immunol. Lett. **116**:117.
9. Jaleco, S. *et al.* (2003) J. Immunol. **171**:61.
10. Malek, T.R. (2003) J. Leukoc. Biol. **74**:961.
11. Laurence, A. *et al.* (2007) Immunity **26**:371.
12. Kryczek, I. *et al.* (2007) J. Immunol. **178**:6730.
13. Afzali, B. *et al.* (2007) Clin. Exp. Immunol. **148**:32.
14. Fehervari, Z. *et al.* (2006) Trends Immunol. **27**:109.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449