



Biotinylated Bovine IL-4 Polyclonal Antibody

Antigen-affinity purified Rabbit anti-Bovine IL-4 antibody

Catalog Number: GR109077

Background

IL-4 is an interleukin, a type of cytokine immune system signaling molecule. IL-4 is a T cell stimulatory cytokine best known for inducing T cell proliferation, the production of immunoglobulins made by B cells and differentiation and proliferation of natural killer cells (1,2). IL-4 is also necessary during T cell development in the thymus for the maturation of a unique subset of T cells that are termed regulatory T cells (T-regs) (3, 4, 5). Conversely, IL-4 is involved in activation induced cell death (AICD) that is observed post T cell expansion by increasing levels of Fas on CD4+ T cells (6). IL-4 signals through a trimeric receptor complex consisting of IL-4 receptor alpha (CD25), IL-4 receptor beta (CD122) and a common gamma chain (γ c). IL-4 $R\alpha$ binds exclusively to IL-4 with low affinity and increases binding affinity of the whole receptor complex including IL-4 $R\beta$ and γ c subunits. IL-4 $R\beta$ is also used by IL-4. The common γ c is shared by all members of this family of cytokines including IL-4, IL-7, IL-9, IL-13, and IL-41. Binding of IL-4 activates the Ras/MAPK, JAK/Stat and PI 3-kinase/Akt signaling modules (1,2).

References

1. Ma, A. et al. (2006) *Annu Rev Immunol* 24, 657-79.
2. Gaffen, S.L. and Liu, K.D. (2004) *Cytokine* 28, 109-23.
3. Sakaguchi S, et al (1995). *J. Immunol.* 155 (3): 1151-64.
4. Fehérvári, Z. et al. (2006) *Trends Immunol* 27, 109-11.
5. Antony, P.A. et al. (2006) *J Immunol* 176, 5255-66.
6. Jaleco, S. et al. (2003) *J Immunol* 171, 61-8.

**FOR LABORATORY RESEARCH USE ONLY
NOT FOR USE IN HUMANS AND ANIMALS**

Related products

1. GR238016 50 ml Reagent Reservoir, 100/case, 5 packs/case (pack of 20)
2. GR238004 Tissue Culture 96-well Microplate, individually packed, Case of 50
3. GR238019 1.5 ml Microcentrifuge tube with screw cap and free-standing, pack of 500
4. GR238007 125 ml leak-resistant HDPE bottle, colorless, pack of 24
5. GR238002 Microplate 12x8-Well Strip High Binding, Case of 50
6. GR238003 Microplate 12x8-Well Strip Medium Binding, Case of 50
7. GR238032 42592 Costar Stripwell Microplate 1 x 8 Flat Bottom, High Binding, Case of 100
8. GR238001 468667 Thermo Microplate 12x8-Well Strip Nunc Maxisorp F8, Case of 60
9. GR238031 96-well microplate sealer plastic, pack of 100



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Description

Size: 50 µg

Species reactivity: Bovine, ovine

Specificity: Detects Bovine IL-4 in direct and indirect ELISAs and Western blots.

Source: Polyclonal Rabbit IgG

Purification: Antigen-affinity purified

Immunogen: *E. coli* derived recombinant Bovine IL-4, His25-Cys135, and Accession # P30367

Endotoxin Level: < 0.20 EU per 1 µg of the antibody by the LAL method.

Conjugate: Biotin

Formulation: Lyophilized from PBS with 5% Trehalose.

Application

Recommended concentration:

Western blot: > 0.1 µg/ml

Immunocytochemistry: 5-15 µg/ml

ELISA: 0.2-0.8 µg/ml

Stability & Storage

Reconstitution: reconstitute at 0.2 mg/ml in sterile and 0.05% azide.

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, at -20°C to -70°C, as supplied.
- 6 months from date of receipt, at -20°C to -70°C, reconstituted.

DECLARATION

THIS REAGENT IS FOR IN VITRO LABORATORY TESTING AND RESEARCH USE ONLY. DO NOT USE IT FOR CLINICAL DIAGNOSTICS. DO NOT USE OR INJECT IT IN HUMANS AND ANIMALS.