



## **Biotinylated Bovine IL-6 Polyclonal Antibody**

Antigen-Affinity purified rabbit anti-Bovine IL-6 antibody

Catalog Number: GR109079

### **Background**

IL-6 is an interleukin that acts as both a pro-inflammatory and anti-inflammatory cytokine and is produced by T cells, macrophages, fibroblasts, osteoblasts, endothelial and other cells (1,2,3). IL-6 induces proliferation and differentiation and acts on B cells, T cells, thymocytes, and others. IL-6 is one of the most important mediators of fever and of the acute phase response. In the muscle and fatty tissue, IL-6 stimulates energy mobilization that leads to increased body temperature. IL-6 can be secreted by macrophages in response to specific microbial molecules, referred to as pathogen associated molecular patterns (PAMPS). IL-6 in concert with TGF $\beta$  is important for developing Th17 responses. IL-6 binds to IL-6R $\alpha$  that through association induces gp130 homodimerization (1). gp130 homodimerization triggers the Jak/STAT cascade and the SHP2/Erk Map kinase cascade (1,4,5). IL-6 also forms a complex with an IL-6R $\alpha$  splice variant that is non-membrane associated (4). The IL-6/soluble IL-6R $\alpha$  complex can then activate the gp130 signaling pathway on cells that express gp130 but not IL6R $\alpha$  (4). IL-6 is relevant to many disease processes such as diabetes (6), atherosclerosis (7), depression (8), Alzheimer's Disease (9), systemic lupus erythematosus (10), prostate cancer (11), breast cancer (12), and rheumatoid arthritis (13).

### **References**

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### **Description**

Size: 50 µg

Species reactivity: Bovine, ovine

Specificity: Detects Bovine IL-6 in direct ELISA and Western blot.

Source: Polyclonal rabbit IgG

Purification: Antigen-affinity purified

Immunogen: *E. coli* derived recombinant Bovine IL-6, Val21-Lys209, and Accession # NP\_776348.1

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

Conjugate: Biotin

Formulation: Lyophilized from 0.2 µm filtered PBS (pH 7.3).

### **Application**

Recommended concentration:

Western blot: 0.3-0.5 µg/ml

Immunocytochemistry: 5-15 µg/ml

ELISA: 0.2-0.6 µg/ml

Neutralization: Measured by its ability to neutralize IL-6 induced proliferation in the T1165.85.2.1 mouse plasmacytoma cell line. RP Nordan and M Potter (1986) Science 233:566. The Neutralization Dose (ND<sub>50</sub>) is typically 1.5-4.5 µg/mL in the presence of 4 ng/mL recombinant Bovine IL-6.

### **Stability & Storage**

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

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

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

### **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.