



## Genorise<sup>®</sup> Ovine IL-6 Polyclonal Antibody

Antigen affinity-purified rabbit anti-ovine IL-6 antibody

Catalog Number: GR105092

### 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

1. Heinrich, P.C. et al. (1998) *Biochem J* 334 ( Pt 2), 297-314.
2. Heinrich, P.C. et al. (1998) *Z Ernährungswiss* 37 Suppl 1, 43-9.
3. Febbraio MA and Pedersen BK (2005). *Exerc Sport Sci Rev* 33 (3): 114–9.
4. Jones, S.A. (2005) *J Immunol* 175, 3463-8.
5. Jenkins, B.J. et al. (2004) *Mol Cell Biol* 24, 1453-63.
6. Kristiansen OP and Mandrup-Poulsen T (2005). *Diabetes* 54 Suppl 2: S114–24.
7. Dubiński A and Zdrojewicz Z (2007). *Pol. Merkur. Lekarski* 22 (130): 291–4.
8. Dowlati Y, et al (2010). *Biological Psychiatry* 67 (5): 446–457.
9. Swardfager W, et al (2010). *Biological Psychiatry* 68 (10): 930–941.
10. Tackey E, et al (2004). *Lupus* 13 (5): 339–43.
11. Smith PC, et al (2001). *Cytokine Growth Factor Rev.* 12 (1): 33–40.
12. Hong, D.S. et al. (2007) *Cancer* 110, 1911-28.
13. Nishimoto N (2006). *Curr Opin Rheumatol* 18 (3): 277–81



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### Description

Size: 100 µg

Species reactivity: Ovine, bovine

Specificity: Ovine IL-6.

Source: Rabbit IgG

Purification: Antigen-affinity purified

Immunogen: *E. coli* derived recombinant ovine IL-6, Pro29-Lys208

Accession # NP\_001009392.1

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

Formulation: Lyophilized from 0.2 µm filtered PBS (pH 7.3) containing 5% trehalose.

### Application

Recommended concentration:

Western blot-0.3 µg/ml

Immunocytochemistry-5-15 µg/ml

ELISA: 0.5-1 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 ovine IL-6.

**Reconstitution:** Reconstitute the antibody at 200 µg/mL in sterile PBS.

### Stability & Storage

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

- 6 months from date of receipt, -20°C to -70°C.

### 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.

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NOT FOR USE IN HUMANS AND ANIMALS**