



## Genorise<sup>®</sup> Ovine TNF- $\alpha$ Polyclonal Antibody

Antigen-affinity purified donkey anti-ovine TNF- $\alpha$  antibody  
Catalog Number: GR130002

### Background

TNF- $\alpha$ , the prototypical member of the TNF protein superfamily, is a homotrimeric type-II membrane protein (1, 2). Membrane bound TNF- $\alpha$  is cleaved by the metalloprotease TACE/ADAM17 to generate a soluble homotrimer (2). Both membrane and soluble forms of TNF- $\alpha$  are biologically active. TNF- $\alpha$  is produced primarily by macrophages, but it is produced also by a broad variety of cell types including lymphoid cells, mast cells, endothelial cells, cardiac myocytes, adipose tissue, fibroblasts, and neuronal tissue (1). Cellular response to TNF- $\alpha$  is mediated through interaction with receptors TNF-R1 and TNF-R2 and results in activation of pathways that favor both cell survival and apoptosis depending on the cell type and biological context. Activation of kinase pathways (including JNK, ERK (p44/42), p38 MAPK and NF- $\kappa$ B) promotes the survival of cells, while TNF- $\alpha$  mediated activation of caspase-8 leads to programmed cell death (1,2). TNF- $\alpha$  plays a key regulatory role in inflammation and host defense against bacterial infection, notably *Mycobacterium tuberculosis* (3). TNF- $\alpha$  causes many of the clinical problems associated with autoimmune disorders such as rheumatoid arthritis, ankylosing spondylitis, inflammatory bowel disease, psoriasis, hidradenitis suppurativa and refractory asthma. The role of TNF- $\alpha$  in autoimmunity is underscored by blocking TNF- $\alpha$  action to treat rheumatoid arthritis and Crohn's disease (1, 2, 4).

### References

1. Aggarwal, B.B. (2003) *Nat Rev Immunol* 3, 745-56.
2. Hehlgans, T. and Pfeffer, K. (2005) *Immunology* 115, 1-20.
3. Lin, P.L. et al. (2007) *J Investig Dermatol Symp Proc* 12, 22-5.
4. Brennan, F.M. and McInnes, I.B. (2008) *J Clin Invest* 118, 3537-45.

### 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



## Genorise® Ovine TNF- $\alpha$ Polyclonal Antibody

Antigen-affinity purified donkey anti-ovine TNF- $\alpha$  antibody  
Catalog Number: GR130002

### Description

Size: 100  $\mu$ g

Species reactivity: Ovine, bovine

Specificity: Detects ovine TNF- $\alpha$  in direct ELISA and Western blot.

Source: Polyclonal donkey IgG

Purification: Antigen-affinity purified

Immunogen: *E. coli* derived recombinant ovine TNF- $\alpha$ , Leu78-Lys234, and Accession # NP\_001020031.1

Endotoxin Level: <0.20 EU per 1  $\mu$ g of the antibody by the LAL method.

Formulation: Lyophilized from 0.2  $\mu$ m filtered PBS with 5% trehalose.

### Application

Recommended concentration:

Western blot-0.2-0.4  $\mu$ g/ml

Immunocytochemistry-5-15  $\mu$ g/ml

ELISA: 0.3-1.0  $\mu$ g/ml

Neutralization: Measured by its ability to neutralize TNF- $\alpha$  activity in the mouse L929 cell line. The Neutralization Dose (ND<sub>50</sub>) is typically 0.02-.005  $\mu$ g/mL in the presence of 1.0 ng/mL Recombinant Ovine TNF- $\alpha$ .

### Preparation, Stability & Storage

Reconstitution: Reconstitute at 200  $\mu$ g/ml in sterile PBS.

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

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