Porcine TNF-α Antibody  
Monoclonal Mouse IgG, Clone # 103304  
Catalog Number: MAB6902

**DESCRIPTION**

**Species Reactivity**  
Porcine

**Specificity**  
Detects porcine TNF-α in ELISAs.

**Source**  
Monoclonal Mouse IgG, Clone # 103304

**Purification**  
Protein A or G purified from hybridoma culture supernatant

**Immunogen**  
E. coli-derived recombinant porcine TNF-α  
Arg78-Leu232  
Accession # P23563

**Formulation**  
Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.  
*Small pack size (SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

**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.

**Porcine TNF-α Sandwich Immunoassay**

**ELISA Capture**  
2-8 μg/mL  
Porcine TNF-α Antibody (Catalog # MAB6902)

**ELISA Detection**  
0.5-2.0 μg/mL  
Porcine TNF-α Biotinylated Antibody (Catalog # BAM6903)

**Standard**  
Recombinant Porcine TNF-α (Catalog # 690-PT)

**PREPARATION AND STORAGE**

**Reconstitution**  
Reconstitute at 0.5 mg/mL in sterile PBS.

**Shipping**  
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.  
*Small pack size (SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C

**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**

Tumor necrosis factor alpha (TNF-α), also known as cachectin and TNFSF2, is the prototypic ligand of the TNF superfamily. It is a pleiotropic molecule that plays a central role in inflammation, apoptosis, and immune system development. TNF-α is produced by a wide variety of immune and epithelial cell types (1, 2). Porcine TNF-α consists of a 35 amino acid (aa) cytoplasmic domain, a 21 aa transmembrane segment, and a 176 aa extracellular domain (ECD) (3). Within the ECD, porcine TNF-α shares 69% - 86% aa sequence identity with bovine, canine, cotton rat, equine, feline, human, mouse, rat, and rhesus TNF-α. The 26 kDa type 2 transmembrane protein is assembled intracellularly to form a noncovalently linked homotrimer (4). Ligation of this complex induces reverse signaling that promotes lymphocyte costimulation but diminishes monocyte responsiveness (5). Cleavage of membrane bound TNF-α by TACE/ADAM17 releases a 55 kDa soluble trimeric form of TNF-α (6, 7). TNF-α trimers bind the ubiquitous TNF RI and the hematopoietic cell-restricted TNF RI, both of which are also expressed as homotrimers (1, 8).

TNF-α regulates lymphoid tissue development through control of apoptosis (2). It also promotes inflammatory responses by inducing the activation of vascular endothelial cells and macrophages (2). TNF-α is a key cytokine in the development of several inflammatory disorders (5). It contributes to the development of type 2 diabetes through its effects on insulin resistance and fatty acid metabolism (10, 11).

**References:**