

DESCRIPTION

Species Reactivity	Porcine
Specificity	Detects porcine IL-6 in direct ELISAs and Western blots. Approximately 2% cross-reactivity with recombinant mouse (rm) IL-6, recombinant rat IL-6, and rmlIF is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 77830
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant porcine IL-6 Pro29-Met212 Accession # P26893
Formulation	Lyophilized from a 0.2 µm filtered solution in HEPES and NaCl with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

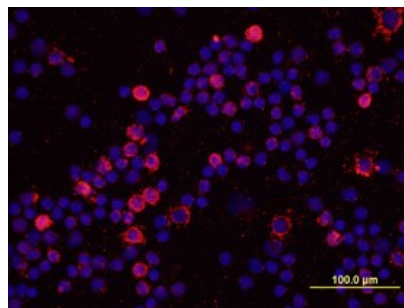
APPLICATIONS

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.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Porcine IL-6 (Catalog # 686-PI)
Immunocytochemistry	8-25 µg/mL	See Below

DATA

Immunocytochemistry



IL-6 in Porcine PBMCs. IL-6 was detected in immersion fixed porcine peripheral blood mononuclear cells (PBMCs) using 10 µg/mL Mouse Anti-Porcine IL-6 Monoclonal Antibody (Catalog # MAB686) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). View our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

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. <ul style="list-style-type: none"> • 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

Interleukin 6 (IL-6) is a pleiotropic α -helical cytokine that plays important roles in acute phase reactions, inflammation, hematopoiesis, bone metabolism, and cancer progression. IL-6 activity is central to the transition from acute inflammation to either acquired immunity or chronic inflammatory disease. It is secreted by multiple cell types as a 22-28 kDa phosphorylated and variably glycosylated molecule (1-4). Mature porcine IL-6 is 183 amino acids (aa) in length and shares 61%, 42%, and 42% aa sequence identity with human, mouse, and rat IL-6 (5). IL-6 induces signaling through a cell surface heterodimeric receptor complex composed of a ligand binding subunit (IL-6 R) and a signal transducing subunit (gp130). IL-6 binds to IL-6 R, triggering IL-6 R association with gp130 and gp130 dimerization (6). gp130 is also a component of the receptors for CLC, CNTF, CT-1, IL-11, IL-27, LIF, and OSM (7). Soluble forms of IL-6 R are generated by both alternate splicing and proteolytic cleavage (3). In a mechanism known as trans-signaling, complexes of soluble IL-6 and IL-6 R elicit responses from gp130-expressing cells that lack cell surface IL-6 R (3). Trans-signaling enables a wider range of cell types to respond to IL-6, as the expression of gp130 is ubiquitous while that of IL-6 R is predominantly restricted to hepatocytes, leukocytes, and lymphocytes (3). Soluble splice forms of gp130 block trans-signaling from IL-6/IL-6 R but not from other cytokines that utilize gp130 as a coreceptor (4, 8).

References:

1. Van Snick, J. (1990) *Annu. Rev. Immunol.* **8**:253.
2. Hodge, D.R. *et al.* (2005) *Eur. J. Cancer* **41**:2502.
3. Jones, S.A. (2005) *J. Immunol.* **175**:3468.
4. Rose-John, S. *et al.* (2006) *J. Leukoc. Biol.* **80**:227.
5. Mathialagan, N. *et al.* (1992) *Mol. Reprod. Dev.* **32**:324.
6. Murakami, M. *et al.* (1993) *Science* **260**:1808.
7. Muller-Newen, G. (2003) *Sci. STKE* **2003**:PE40.
8. Mitsuyama, K. *et al.* (2006) *Clin. Exp. Immunol.* **143**:125.