Equine IL-6 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1886

DESCRIPTION

Species Reactivity	Equine
Specificity	Detects equine IL-6 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 50% cross-reactivity with recombinant human IL-6, recombinant porcine IL-6 and recombinant canine IL-6 is observed and approximately 20% cross-reactivity with recombinant mouse IL-6 and recombinant rat IL-6 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant equine IL-6 Phe26-Met208 Accession # Q95181
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
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 as a 0.2 µm filtered solution in PBS.

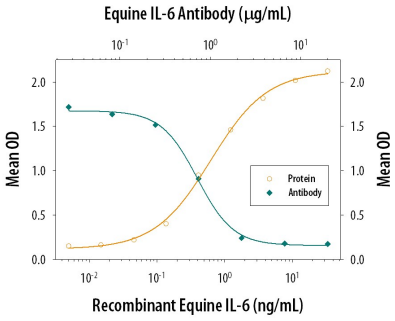
APPLICATIONS

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	0.1 µg/mL	Recombinant Equine IL-6 (Catalog # 1886-EL)
Immunocytochemistry	5-15 µg/mL	See Below
Neutralization	Measured by its ability to neutralize IL-6-induced proliferation in the T1165.85.2.1 mouse plasmacytoma cell line. Nordan, R. P. and M. Potter (1986) Science **233**:566. The Neutralization Dose (ND_{50}) is typically 0.5-1.5 µg/mL in the presence of 4 ng/mL Recombinant Equine IL-6.	

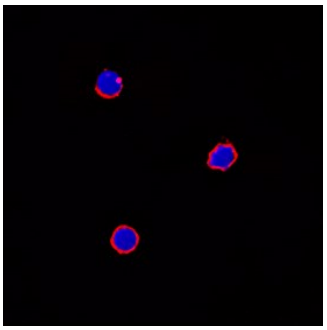
DATA

Neutralization



Cell Proliferation Induced by IL-6 and Neutralization by Equine IL-6 Antibody. Recombinant Equine IL-6 (Catalog # 1886-EL) stimulates proliferation in the T1165.85.2.1 mouse plasmacytoma cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Equine IL-6 (4 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Equine IL-6 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1886). The ND_{50} is typically 0.5-1.5 µg/mL.

Immunocytochemistry



IL-6 in Equine PBMCs. IL-6 was detected in immersion fixed equine peripheral blood mononuclear cells (PBMCs) using Goat Anti-Equine IL-6 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1886) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to the cell surface. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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.

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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 kDa-28 kDa phosphorylated and variably glycosylated molecule (1-4). Mature equine IL-6 is 181 amino acids (aa) in length and shares 61%, 42%, and 43% 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:

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