

#### DESCRIPTION

<b>Species Reactivity</b>	Porcine
<b>Specificity</b>	Detects the heterodimeric form of porcine IL-12 (p35/p40) in direct ELISAs. Western blotting data indicates recognition of the IL-12/IL-35 p35 subunit. In direct ELISAs and Western blots, 20-100% cross-reactivity with the disulfide-linked heterodimeric forms of recombinant mouse IL-12 and recombinant human IL-12 is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 116219
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Chinese hamster ovary cell line CHO-derived recombinant porcine IL-12 p35/p40 heterodimer p40 Ile23-Asn324, p35 Arg26-Ser222 Accession # Q28938, Q29053
<b>Conjugate</b>	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm
<b>Formulation</b>	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

#### 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Intracellular Staining by Flow Cytometry</b>	0.25-1 µg/10 <sup>6</sup> cells	Porcine peripheral blood mononuclear cells treated with LPS, then fixed with paraformaldehyde and permeabilized with saponin

#### PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

#### BACKGROUND

Interleukin 12, also known as natural killer cell stimulatory factor (NKSF) or cytotoxic lymphocyte maturation factor (CLMF), is a heterodimeric pleiotropic cytokine made up of a 40 kDa (p40) subunit and a 35 kDa (p35) subunit. IL-12 is produced by macrophages and B lymphocytes and has been shown to have multiple effects on T cells and natural killer (NK) cells. Some of these IL-12 activities include the induction of IFN-γ and TNF in resting and activated T and NK cells, the enhancement of cytotoxic activity of resting NK and T cells, the stimulation of resting T cell proliferation in the presence of a mitogen, and the enhancement of NK cell proliferation. Current evidence indicates that IL-12 is a key mediator of cellular-immunity and induces the differentiation of Th1 cells from precursor T helper cells. Based on its activities, it has been suggested that IL-12 may have therapeutic potential as a vaccine adjuvant that promotes cellular-immunity and as an anti-tumor and anti-viral agent.

Porcine IL-12 subunits p35 and p40 share about 85% homology to the human subunits, but differ by containing a 3 aa addition in the p35 subunit and a 4 aa deletion in the p40 subunit. Porcine IL-12 induces proliferation of human lymphoblasts and IFN-γ secretion by human and porcine lymph nodes. Porcine IL-12 has been detected in lymphoid tissues including inguinal and mesenteric lymph nodes, Peyer's patches, spleen and thymus.

#### References:

1. Foss, D. *et al.* (1997) *Vet. Immunol. Immunopathol.* **57**:121.

#### PRODUCT SPECIFIC NOTICES

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