

DESCRIPTION

Species Reactivity	Porcine
Specificity	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.
Source	Monoclonal Mouse IgG ₁ Clone # 116219
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant porcine IL-12 p35/p40 heterodimer p40 Ile23-Asn324, p35 Arg26-Ser222 Accession # Q28938, Q29053
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	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.

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

PREPARATION AND STORAGE

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

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.

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