

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
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	1 µg/mL	Porcine IL-12/IL-35 p35
Intracellular Staining by Flow Cytometry	2.5 µg/10 ⁶ cells	Porcine peripheral blood mononuclear cells treated with LPS, then fixed with paraformaldehyde and permeabilized with saponin

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 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 comitogen, 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.