

DESCRIPTION

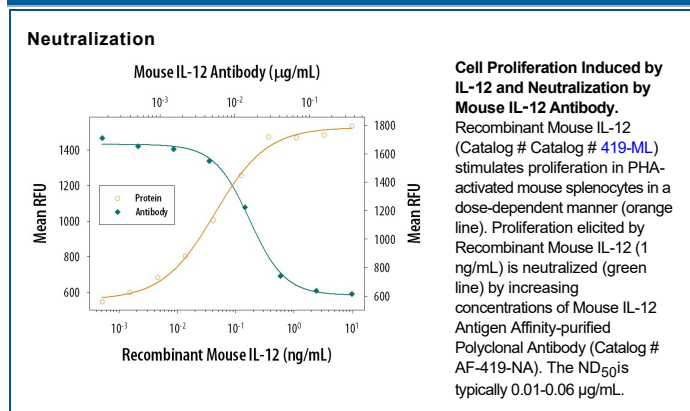
Species Reactivity	Mouse
Specificity	Detects mouse IL-12 in direct ELISAs and Western blots. In direct ELISAs and Western blots (non-reducing and reducing conditions), this antibody shows less than 10% cross-reactivity with recombinant human IL-12.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf21-derived recombinant mouse IL-12 Mouse IL-12 heterodimer: Mouse IL-12 p40 (Met23-Ser335) Accession # P43432, Mouse IL-12 p35 (Arg23-Ala215) Accession # NP_032377
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 either lyophilized or 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 Mouse IL-12 (Catalog # 419-ML)
Neutralization	Measured by its ability to neutralize IL-12-induced proliferation in PHA-activated mouse splenocytes. Mattner, F. <i>et al.</i> (1993) Eur. J. Immunol. 23 :2202. The Neutralization Dose (ND ₅₀) is typically 0.01-0.06 µg/mL in the presence of 1 ng/mL Recombinant Mouse IL-12.	

DATA



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. <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.

Human and mouse IL-12 share 70% and 60% amino acid sequence identity in their p40 and p35 subunits, respectively. While mouse IL-12 is active on both human and mouse cells, human IL-12 is not active on murine cells. R&D Systems' recombinant mouse IL-12 preparations were proteolytically cleaved between residues G158 and E159 of the mature p35 subunit. Thus, under reducing conditions, three bands representing the p40 subunit, the p35 R1 - G158 peptide and the p35 E159-A193 peptide can be observed in SDS-PAGE. The biological activity of this cleaved mouse IL-12 is comparable to that of the intact human IL-12.