

Human IL-12/IL-23 p40 Antibody

Monoclonal Mouse IgG₁ Clone # 24901 Catalog Number: MAB1510

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human IL-12 (p40/p35 heterodimer), IL-23 (p40/p19 heterodimer), and p40 homodimers in direct ELISAs. In direct ELISAs, this antibody does not cross-react with recombinant mouse (rm) IL-12 p40 or rpIL-12.
Source	Monoclonal Mouse IgG ₁ Clone # 24901
Purification	Protein A or G purified from ascites
Immunogen	S. frugiperda insect ovarian cell line Sf 21-derived recombinant human IL-12 p40/p35 heterodimer
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.

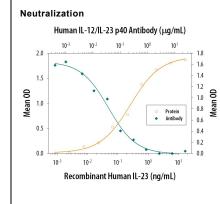
APPLICATIONS

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

Neutralization

Measured by its ability to neutralize IL-23-induced IL-17 secretion in mouse splenocytes. Aggarwal, S. *et al.* (2003) J. Biol. Chem. **278**:1910. The Neutralization Dose (ND $_{50}$) is typically 0.02-0.1 µg/mL in the presence of 0.75 ng/mL Recombinant Human IL-23 and 10 ng/mL Recombinant Mouse IL-2.

DATA



IL-17 Secretion Induced by IL-23 and Neutralization by Human IL-12/IL-23 p40 Antibody. In the presence of Recombinant Mouse IL-2 (10 ng/mL, Catalog # 402-ML), Recombinant Human IL-23 (Catalog # 1290-IL) stimulates IL-17 secretion in mouse splenocytes in a dose-dependent manner (orange line), as measured by the Mouse IL-17 Quantikine ELISA Kit (Catalog # M1700). Under these conditions, IL-17 secretion elicited by Recombinant Human IL-23 (0.75 ng/mL) is neutralized (green line) by increasing concentrations of Human IL-12/IL-23 p40 Monoclonal Antibody (Catalog # MAB1510). The ND₅₀ is typically 0.02-0.1 µg/mL. This antibody also neutralizes Human IL-12 induced activity in human PBLs. The ND50 is approximately 0.05-0.25 µg/mL in the presence of 1 ng/mL Recombinant Human

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.

- 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 pleiotropic cytokine originally identified in the medium of activated human B lymphoblastoid cell lines. IL-12 is produced by macrophages and B lymphocytes and has multiple effects on T-cells and NK cells, including stimulation of cytotoxic activity, proliferation, and promotion of Th1 development as well as IFN-γ and TNF production. IL-12 is a disulfide-linked, 70 kDa (p70) heterodimeric glycoprotein composed of a 40 kDA (p40) subunit and a 35 kDa (p35) subunit. The p40 and p35 subunits by themselves have no IL-12 activity, the p40 dimer has been shown to bind the IL-12 receptor and to be an IL-12 antagonist. Free p35 has not been detected in supernatant solutions of cultured cells expressing only p35 or both p35 and p40 mRNAs. In contrast, p40 is secreted in excess of IL-12 in cells expressing both p35 and p40 mRNAs. In contrast, p40 is secreted in excess of IL-12 in cells expressing both p35 and p40 mRNAs. The p40 subunit of IL-12 has been shown to have extensive amino acid sequence homology to the extracellular domain of the human IL-6 receptor while the p35 subunit shows distant but significant sequence similarity to IL-6, G-CSF, and chicken MGF. These observations have led to the suggestion that IL-12 might have evolved from a cytokine/soluble receptor complex. Human and mouse IL-12 share 70% and 60% amino acid sequence homology in their p40 and p35 subunits, respectively. IL-12 apparently shows species specificity with human IL-12 reportedly showing minimal activity in the murine system.

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