Human IL-12 p70 Antibody

Recombinant Monoclonal Mouse IgG_1 Clone # 24945R

Catalog Number: MAB611R

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-12 p70 in ELISAs. In sandwich immunoassays, no cross-reactivity with recombinant human (rh) IL-12 p40, rhIL-12 p35, rhIL-23 or recombinant mouse IL-12 is observed.
Source	Recombinant Monoclonal Mouse IgG_1 Clone # 24945R
Purification	Protein A or G purified from cell culture supernatant
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human IL-12 heterodimer Arg23-Ser219 of p35, Ile23-Ser328 of p40 Accession # P29459(p35) & P29460 (p40)
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.

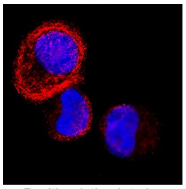
APPLICATIONS

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.*

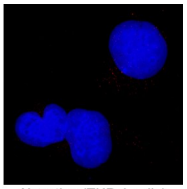
	Recommended Concentration	Sample
Immunocytochemistry	8-25 µg/mL	See Below
Human IL-12 p70 Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Human IL-12 p70 Antibody (Catalog # MAB611R)
ELISA Detection	0.1-0.4 µg/mL	Human IL-12 Biotinylated Antibody (Catalog # BAF219)
Standard		Recombinant Human IL-12 (Catalog # 219-IL)

DATA

Immunocytochemistry



Positive (stimulated THP-1 cells)



Negative (THP-1 cells)

IL-12 p70 in THP-1 Human Cell Line. IL-12 p70 was detected in immersion fixed THP-1 human acute monocytic leukemia cell line treated with 5 ng/mL PMA for 48 hours and 100 ng/mL LPS and 3 µM monensin for 24 hours (positive staining) and THP-1 human acute monocytic leukemia cell line (untreated, negative staining) using Mouse Anti-Human IL-12 p70 Monoclonal Antibody (Catalog # MAB611R) at 8 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. Staining was performed using our protocol for Fluorescent ICC Staining of Non-adherent Cells.

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.

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BACKGROUND

Interleukin 12, also known as natural killer cell stimulatory factor (NKSF) or cytotoxic lymphocyte maturation factor (CLMF), is a pleiotrophic cytokine originally identified in the medium of activated human B lymphoblastoid cell lines. 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 murine 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. 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. These effects include inducing production of IFN-γ and TNF by resting and activated T and NK cells, synergizing with other IFN-γ inducers at both the transcriptional and post-transcriptional levels. This interaction induces IFN-γ gene expression, enhancing the cytotoxic activity of resting NK and T cells, inducing and synergizing with IL-2 in the generation of lymphokine-activated killer (LAK) cells, acting as a co-mitogen to stimulate proliferation of resting T cells, and inducing proliferation of activated T and NK cells. Current evidence indicates that IL-12, produced by macrophages in response to infectious agents, is a central mediator of the cell-mediated immune response by its actions on the development, proliferation, and activities of TH1 cells. In its role as the initiator of cell-mediated immunity, it has been suggested that IL-12 has therapeutic potential as a stimulator of cell-mediated immune responses to microbial pathogens, metastatic cancers, and viral infections such as AIDS.

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