

# Cytokines

## Human Recombinant IL-13



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### Interleukin 13

Catalog #	78029.1	10 µg
	78029	100 µg
	78029.2	500 µg
	78029.3	1000 µg

## Product Description

Interleukin 13 (IL-13) is a cytokine important in type 2 immune responses and is expressed by T helper type 2 (Th2) cells and group 2 innate lymphoid cells (ILC2s) (Pulendran & Artis). IL-13 binds a receptor composed of IL-4Ra and IL-13Ra1 or IL-13Ra2 (Wynn 2003). IL-13 receptor is expressed on B cells and promotes B cell proliferation, induces class switching to IgG4 and IgE, and functions in the recruitment and activation of IgE-producing B cells (Hershey). The receptor is also expressed on basophils, eosinophils, mast cells, endothelial cells, fibroblasts, monocytes, macrophages, respiratory epithelial cells, and smooth muscle cells (Hershey). Signaling through the IL-13 receptor activates the JAK/STAT and IRS-1/IRS-2 pathways. In vivo, IL-13 has a role in resistance to extracellular helminth parasites by regulating gastrointestinal parasite expulsion, as well as in airway hyperresponsiveness, allergic inflammation, tissue remodeling, tumor cell growth, and fibrosis (Wynn 2015). Secreted IL-13 is a protein consisting of 112 amino acids with a molecular mass of 10 kDa (Hershey). Human IL-13 is not species-specific but has greater activity on human cells compared to mouse cells (Hershey).

## Product Information

Alternative Names:	Interleukin-13, NC30
Accession Number:	P35225
Amino Acid Sequence:	MSPGVPVPPSTA LRELIEELVN ITQNQKAPLC NGSMVWSINL TAGMYCAALE SLINVSGCSA IEKTQRMLSG FCPHKVSAGQ FSSLHVRDTK IEVAQFVKDL LLHLKLFRE GRQFN
Predicted Molecular Mass:	12.6 kDa
Species:	Human
Cross Reactivity:	Mouse, Rat
Formulation:	Lyophilized from a sterile-filtered solution containing sodium citrate, pH 3.0.
Source:	E. coli

## Specifications

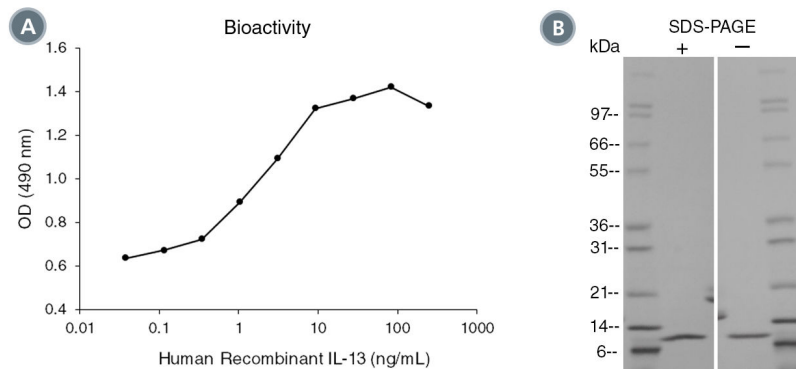
Activity:	The specific activity is $\geq 2 \times 10^5$ units/mg ( $EC_{50} \leq 5$ ng/mL) as determined by a cell proliferation assay using TF-1 cells.
Purity:	$\geq 95\%$
Endotoxin Level:	Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is $\leq 1$ EU/µg protein.

## Preparation and Storage

Storage:	Store at -20°C to -80°C.
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex.

OPTIONAL: After reconstitution, if product will not be used immediately, dilute with concentrated bovine serum albumin (BSA) to a final BSA concentration of 0.1%. The effect of storage of stock solution on product performance should be tested for each application. As a general guide, do not store at 2 - 8°C for more than 1 month or at -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

## Data



(A) The biological activity of Human Recombinant IL-13 was tested by its ability to promote the proliferation of TF-1 cells. Cell proliferation was measured after 62 hours of culture using a fluorometric assay method. The EC<sub>50</sub> is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC<sub>50</sub> in the above example is 3 - 4 ng/mL.

(B) 1 µg of Human Recombinant IL-13 was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant IL-13 has a predicted molecular mass of 12.6 kDa.

## Related Products

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## References

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