**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 ILC2 cells (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 et al.). 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:** MSPGPVPPSTA LRELIEELVN ITQNQKAPLC NGSMWISINL TAGMYCAALE SLINVSGCSA IEKTQRMLSG FCPHKVSAGQ FSSLHVRDTK IEVAQFVKDL LLHLKKLFRE GRQFN  
**Predicted Molecular Mass:** 12.6 kDa  
**Species:** Human  
**Cross Reactivity:** Mouse, Rat  
**Formulation:** Lyophilized from a sterile filtered solution containing containing sodium citrate, pH 3.0  
**Source:** E. coli

**Specifications**

**Activity:** The specific activity is ≥ 2 x 10^5 units/mg (EC50 ≤ 5 ng/mL) as determined by a cell proliferation assay using TF-1 cells.  
**Purity:** ≥ 95%  
**Endotoxin Level:** Measured by kinetic limulus amebocyte lysate (LAL) analysis and is ≤ 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.  
**Reconstitution:** Centrifuge vial before opening. Resuspend the product in 20 mM hydrochloric acid containing 0.1% bovine serum albumin (BSA) to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. Store at 2 - 8°C for up to 1 month or at -20°C to -80°C for up to 3 months. Avoid repeated freeze-thaw cycles. NOTE: If reconstituted product will be used immediately BSA is not required.
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 EC50 is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC50 in the above example is 3 - 4 ng/mL.

(B) 1 ug 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

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References