

# Recombinant Human IL-33

Catalog # FL041

## Product Specifications

Appearance	Sterile filtered White lyophilized (freeze-dried) powder.
Purity	> 96% by SDS-PAGE or HPLC.
Endotoxin	< 0.01 EU/μg of rHuIL-33 protein as determined by LAL method.
Expression System	Expressed in E. coli.
Species	Human
Tag	Tag free.
Activity	Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using murine D10S cells is less than 0.05 ng/ml, corresponding to a specific activity of $\geq 2.0 \times 10^7$ IU/mg.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in 20 mM PB, with 150 mM NaCl, pH 7.4.
Reconstitution	Before use this product, please read the direction below carefully. This vial must be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at $\leq -20^\circ\text{C}$ . Further dilutions should be made in appropriate buffered solutions.
Accession #	O95760 Ser112-Thr270
Amino acid sequence	SITGISPITEYLA SLSTYNDQSITFALEDESYEIYVEDLKKDEKKDKVLLSYYESQHPSNESGDGVDGKMLMVTLSPTKDFWL HANNKEHVELHKCEKPLPDQAFFVLHNMHSNCVSECKTDPGVFIGVDNHLALIKVDSSENLCTENILFKLSET
Molecular weight	Approximately 17.9 kDa, a single non-glycosylated polypeptide chain containing 159 amino acids.
Synonyms	Interleukin-33, IL-1 F11, NF-HEV
Stability & Storage	Shipped on wet ice. For long term storage, the product should be stored $\leq -20^\circ\text{C}$ . Please avoid repeated freeze-thaw cycles after reconstitution. 36 months from date of receipt, $-20$ to $-70^\circ\text{C}$ as supplied. 1 month, $2$ to $8^\circ\text{C}$ under sterile conditions after reconstitution. 3 months, $-20$ to $-70^\circ\text{C}$ under sterile conditions after reconstitution.
Precautions	Recombinant Human IL-33 is for research use only and not for use in diagnostic or therapeutic procedures.

## Background

IL-33, encoded by IL-33 gene located on the Chr.9 in humans, is a 30kDa proinflammatory protein belonging to the IL-1 superfamily and it shares less than 20% a.a. sequence identity with other members. IL-33 secreted by high endothelial venules at high levels, which is found in tonsils, Peyer patches and mesenteric lymph nodes, but not in placenta. It is upregulated in arterial smooth muscle, dermal fibroblasts, and keratinocytes following IL1 $\alpha$  or IL1 $\beta$  stimulation. It elicits its biological effects by interacting with IL1RL1/ST2 and its stimulation recruits MYD88, IRAK1, IRAK4, and TRAF6, followed by phosphorylation of MAPK3/ERK1 and/or MAPK1/ERK2, MAPK14, and MAPK8. IL-33 mature protein has 52-58% a.a. sequence identity with mouse and rat IL-33. Recombinant Human IL-33 is a 17.9kDa protein containing 159 amino acid residues polypeptide chain.

