Recombinant Human Interleukin 33

Cat. No. IL33-320H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human IL-33 produced in E.coli is a single, non-glycosylated polypeptide chain containing 159 amino acids and having a molecular mass of 18 kDa.
Species	Human
Source	E.coli
Description	Human interleukin 33 (IL-33) is a cytokine of the IL-1 superfamily, which is also known as NF-HEV, nuclear factor (NF) in high endothelial venules" (HEVs) and DVS27, a protein that is upregulated in vasospastic cerebral arteries. IL-33, NF-HEV and DVS27 refer to the same protein that is expressed primarily by endothelial and smooth muscle cells in the vasculature and airway. IL-33 mediates its biological effects via IL-1 receptor ST 2, activates NF-kappaB and MAP kinases, and drives production of type 2 cytokines (e.g.IL-4, IL-5 and IL-13) from polarized Th2 cells, leading to severe pathological changes in mucosal organs. Human IL-33 consists of an N-terminal nuclear localization signal (NLS), a helix-turn-helix (HTH) motif, and a C-terminal region with structural homology to IL-1 family cytokines. The C-terminal fragment serves as a cytokine which can be generated by the cleavage of caspase-1 in vitro. IL-33 exhibits both nuclear and extracellular functions.
Biological Activity	The ED50 of rhIL33 as determined by proliferation of D10.G4.1 mouse helper T cells costimulated with B71/Fc Chimera and antiCD3 was < 2ng/ml, corresponding to a Specific Activity of 5.0×10^5 IU/mg.

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Purity	Greater than 95% as determined by (a) Analysis by RP-HPLC; (b) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.
Amino-Acid Sequence	The sequence of the first five N-terminal amino acids was determined and was found to be Ser-Ile-Thr-Gly-Ile.
Endotoxin	Less than 0.1 ng/μg (1 IEU/μg) of rHuIL-33.
Form	The protein was lyophilized after extensive dialysis against 20 mM PB, pH 7.4, 1mM EDTA.
Reconstitution	It is recommended to quick spin followed by reconstitution of rHuIL-33 in PBS to a concentration no less than 100μg/ml, which can then be further diluted to other aqueous solutions.
Storage	Lyophilized rHuIL-33 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rHuIL-33 should be stored at 4°C between 2-7 days and for future use below -18°C. For long-term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please avoid freeze-thaw cycles.

GENE INFORMATION

Gene Name	IL33 interleukin 33 [Homo sapiens]
Official Symbol	IL33
Synonyms	IL33; DVS27; NF-HEV; NFEHEV; C9orf26; DKFZp586H- 0523; RP11-575C20.2; interleukin-33; IL-33; IL-1F11; OTTHUMP00000021041; DVS27-related protein; interleukin-1 family member 11; nuclear factor from high endothelial venules; Nuclear factor from high endothelial venules; Interleukin-1 family member 11

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Gene ID	90865
mRNA Refseq	NM_033439
Protein Refseq	NP_254274
MIM	608678
UniProt ID	O95760
Chromosome Location	9p24.1
Function	cytokine activity; protein binding

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