

## GMP Recombinant Human IL-33 (carrier-free)

<b>Catalog# / Size</b>	581814 / 25 µg 581816 / 100 µg
<b>Other Names</b>	C9orf26, IL1F11, NFHEV, DVS 27
<b>Description</b>	IL-33 belongs to the IL-1 family and is closely related in structure to IL-18 and IL-1β. IL-33, IL-1β, and IL-18 are synthesized as biologically inactive precursors and are cleaved by the enzyme caspase-1 to be secreted as active mature forms. IL-33 stimulates target cells by binding to the IL-1R/TLR superfamily member ST2 and, subsequently, activates NF-κβ and MAPK pathways via identical signalling events to those observed for IL-1β. In addition, IL-33 is a nuclear factor (NF-HEV) abundantly expressed in high endothelial venules from lymphoid organs that associate with chromatin and exhibit transcriptional regulatory properties.

### Product Details

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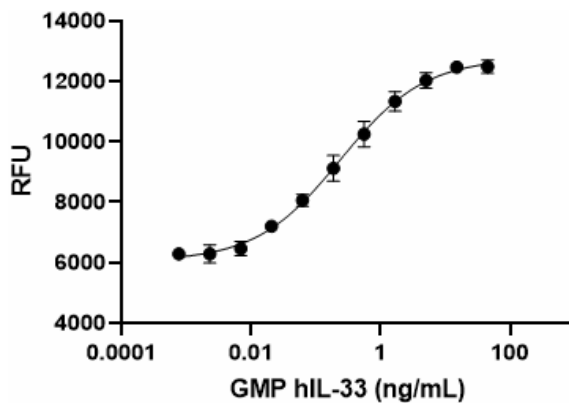
<b>Source</b>	Human IL-33, amino acids Ser112-Thr270 (Accession# NM_033439) was expressed in <i>E. coli</i> .
<b>Molecular Mass</b>	The 159 amino acid recombinant protein has a predicted molecular mass of approximately 18 kD. The DTT-reduced protein migrates at approximately 19 kD and non-reduced protein migrates at approximately 20 kD by SDS-PAGE. The N-terminal amino acid is Serine.
<b>Purity</b>	>95%, as determined by Coomassie stained SDS-PAGE.
<b>Formulation</b>	0.1 µm filtered protein solution is in PBS, 1 mM EDTA, 2 mM TCEP
<b>Endotoxin Level</b>	Less than 0.1 EU per µg protein as determined by the LAL method
<b>Concentration</b>	500 µg/mL
<b>Storage &amp; Handling</b>	Unopened vial can be stored between 2°C and 8°C for up to 2 weeks, at -20°C for up to six months, or at -70°C or colder until the expiration date. For maximum results, quick spin vial prior to opening. The protein can be aliquoted and stored at -20°C or colder. Stock solutions can also be prepared at 50 - 100 µg/mL in appropriate sterile buffer, carrier protein such as 0.2 - 1% endotoxin-free BSA or HSA can be added when preparing the stock solution. Aliquots can be stored between 2°C and 8°C for up to one week or stored at -20°C or colder for up to 3 months. <b>Avoid repeated freeze/thaw cycles.</b>
<b>Activity</b>	ED <sub>50</sub> = 0.1 - 0.5 ng/mL as determined by the dose-dependent stimulation of D10.G4.1 cell proliferation. Deep Blue Cell Viability™ Kit (Cat. No. 424701) is used to measure the proliferation.
<b>Application</b>	<a href="#">Bioassay</a> <a href="#">Cell Culture</a>
<b>Application Notes</b>	BioLegend carrier-free recombinant proteins provided in liquid format are shipped on blue-ice. Our comparison testing data indicates that when handled and stored as recommended, the liquid format has equal or better stability and shelf-life compared to commercially available lyophilized proteins after reconstitution. Our liquid proteins are validated in-house to maintain activity after shipping on blue ice and are backed by our <a href="#">100% satisfaction guarantee</a> . If you have any concerns, contact us at <a href="mailto:tech@biolegend.com">tech@biolegend.com</a> .
<b>Disclaimer</b>	<b>GMP Recombinant Proteins.</b> BioLegend GMP recombinant proteins are manufactured in a dedicated GMP facility and compliant with ISO 13485:2016. For research or <i>ex vivo</i> cell processing use. Not for use in diagnostic or therapeutic procedures. Our processes include: <ul style="list-style-type: none"><li>• Batch-to-batch consistency</li><li>• Material traceability</li><li>• Documented procedures</li><li>• Documented employee training</li><li>• Equipment maintenance and monitoring records</li><li>• Lot-specific certificates of analysis</li><li>• Quality audits per ISO 13485:2016</li><li>• QA review of released products</li></ul>

## Antigen Details

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<b>Structure</b>	Cytokine
<b>Distribution</b>	IL-33 mRNA is expressed in a broad range of human tissues, such as heart, small intestine, brain, ovary, testis, pancreas, and colon. Higher IL-33 expression was detected in human keratinocyte, fibroblast, myocyte, and alveolar cells
<b>Function</b>	IL-33 drives production of Th2-associated cytokines from in vitro polarized Th2 cells. In mice, IL-33 injection induced the expression of IL-4, IL-5, and IL-13 and led to severe pathological changes in the lung and the digestive tract. In addition, IL-33 acts as a chemoattractant for Th2 cells, both in vitro and in vivo. TNF- $\alpha$ and IL-1 $\beta$ are activators of IL-33 transcription in fibroblasts and keratinocytes.
<b>Interaction</b>	Th2 cells, mast cells, basophils, eosinophils and natural killer cells
<b>Ligand/Receptor</b>	IL-1 family receptor T1/ST2 and IL-1RAcP (IL-1 receptor associated protein).
<b>Bioactivity</b>	Measured by its ability to induce proliferation of D10.G4.1 cells.
<b>Biology Area</b>	Cell Biology, Immunology, Stem Cells, Transcription Factors
<b>Molecular Family</b>	Cytokines/Chemokines
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Schmitz J, <i>et al.</i> 2005. <i>Immunity</i>. 23:479-90.</li><li>2. Barksby HE, <i>et al.</i> 2007. <i>Clin Exp Immunol</i>. 149:217-25.</li><li>3. Arend WP, <i>et al.</i> 2008. <i>Immunol Rev</i>. 223:20-38.</li><li>4. Suzukawa M, <i>et al.</i> 2008. <i>J Immunol</i>. 181:5981-9.</li><li>5. Moussion C, <i>et al.</i> 2008. <i>PLoS One</i>. 3:e3331.</li><li>6. Mildner M, <i>et al.</i> 2010. <i>Cardiovasc Res</i>. 87:769-77.</li></ol>
<b>Gene ID</b>	<a href="#">90865</a>

## Product Data



GMP recombinant human IL-33 induces dose-dependent proliferation of D10.G4.1 cells. Deep Blue Cell Viability™ Kit (Cat. No. 424701) is used to measure the proliferation. The ED<sub>50</sub> range for this effect is 0.1 - 0.5 ng/mL.

## Symbols Glossary\*

Symbol	Meaning	Symbol Title	Symbol No.	Symbol	Meaning	Symbol Title	Symbol No.
	Catalog number	Catalogue number	5.1.6		Indicates the need for the user to consult the instructions for use.	Consult instructions for use	5.4.3
	Indicates the temperature limits to which the medical device can be safely exposed.	Temperature limit	5.3.7		Indicates a medical device that needs protection from light sources.	Keep away from sunlight	5.3.2
	Indicates the upper limit of temperature to which the medical device can be safely exposed.	Upper limit of temperature	5.3.6		Indicates the date after which the medical device is not to be used.	Use-by date	5.1.4
	Indicates the medical device manufacturer.	Manufacturer	5.1.1		Indicates the authorized representative in the European Community.	Authorized representative in the European Community	5.1.2
	Indicates the manufacturer's batch code so that the batch or lot can be identified.	Batch code	5.1.5		Indicates a medical device that is intended to be used as an in vitro diagnostic medical device.	<i>In vitro</i> diagnostic medical device	5.5.1

\* Symbol information is from EN ISO 15223-1:2016 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied – Part 1: General requirements

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