Anti-hIL-33-IgG
Neutralizing monoclonal antibody against human interleukin 33
Catalog # mabg-hil33-3
For research use only, not for diagnostic or therapeutic use
Version # 16D20-MM

PRODUCT INFORMATION
Content: 3 x 100 µg purified anti-hIL-33-IgG antibody, provided azide-free and lyophilized
Target: natural and recombinant human interleukin-33 (IL-33)
Clone: 19G8
Isotype: Mouse IgG1
Immunogen: Human IL-33 protein expressed in Swiss mice following DNA immunization
Formulation: 0.2 µm filtered solution in a sodium phosphate buffer with glycine, saccharose and stabilizing agents
Antibody resuspension
Add 1 ml of sterile water per vial to obtain a concentration of 0.1 mg/ml.

Storage
- Product is shipped at room temperature. Store lyophilized antibody at -20 °C. Product is stable for at least 1 year.
- Reconstituted antibody is stable for 1 month when stored at 4 °C and for 1 year when aliquoted and stored at -20 °C. Avoid repeated freeze-thaw cycles.

Quality control
- This product has been validated for neutralization.
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

BACKGROUND
Interleukin-33 (IL-33; also known as IL-1F11) is a member of the IL-1 family, a group of cytokines that play important roles in host defense, immune regulation and inflammation. IL-33 mediates its biological effects through ST2 (also known as IL1RL1), a receptor expressed on Th2 and mast cells. IL-33 and ST2 form a complex with IL-1R accessory protein (IL-1RACp), a signaling receptor subunit that is also a member of the IL-1R complex. IL-33 signaling leads to the activation of NF-kB and MAP kinases. IL-33 can function both as a traditional cytokine and as a nuclear factor regulating gene transcription. Following pro-inflammatory stimulation, IL-33 can induce Th2-biased immune responses, such as the production of IL-4, IL-5 and IL-13. In addition, IL-33 is constitutively expressed in endothelial and epithelial cells, it can act as an endogenous danger signal, or damage-associated molecular pattern (DAMP; also called alarmins), in response to tissue damage.

DESCRIPTION
Anti-hIL-33-IgG is a monoclonal antibody against human interleukin 33 (hIL-33). This antibody has been selected for its ability to efficiently neutralize the biological activity of hIL-33. Anti-hIL-33-IgG is produced in hybridomas and purified by affinity chromatography.

APPLICATIONS
Anti-hIL-33-IgG is a neutralizing antibody, it blocks hIL-33-induced cellular activation. Other applications have not been tested.

Neutralization
The exact concentration of antibody required to neutralize hIL-33 activity is dependent on the cytokine concentration, cell type and growth conditions. InvivoGen has determined the neutralization dose for this antibody using recombinant hIL-33 and HEK-Blue™ IL-33 cells. These cells detect bioactive IL-33 by monitoring the activation of the NF-κB and AP-1 pathways. HEK-Blue™ IL-33 cells stably express the IL1RL1 gene, as well as an NF-kB and AP-1-inducible SEAP (secreted embryonic alkaline phosphatase) reporter gene.

Determination of neutralization required an incubation of anti-hIL-33-IgG (10 ng-1 µg/ml) and a negative control antibody (e.g. Mouse IgG1 control which targets E. coli β-galactosidase) with recombinant hIL-33 at 1-10 ng/ml for 30 min prior to the addition of the HEK-Blue™ IL-33 cells. Neutralization of IL-33-induced signaling by anti-hIL-33-IgG was determined after a 24-hour incubation by assessing SEAP production using QUANTI-Blue™, a SEAP detection reagent. QUANTI-Blue™ turns blue following cytokine stimulation but remains pink if neutralization occurs. SEAP levels can be assessed by the naked eye or spectrophotometrically by reading the optical density at 620-655 nm.

RELATED PRODUCTS

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<td>Mouse IgG1 Control</td>
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<td>QUANTI-Blue™</td>
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