

## Anti-IL-33 [874F7-Hu1] Bulk Size Ab03649-10.3-BT

This antibody was created using our proprietary Fc Silent™ engineered Fc domain containing key point mutations that abrogate binding to Fc gamma receptors.

This is a reformatted human IgG1 Fc Silent Fc Silent™ antibody, based on the original human IgG1 format, created for improved compatibility with existing reagents, assays and techniques.

**Isotype and Format:** Human IgG1, Fc Silent™, Kappa

**Clone Number:** 874F7-Hu1

**Alternative Name(s) of Target:** Interleukin-33; C9orf26; IL1F11; NFHEV; Interleukin-1 family member 11; IL-1F11; Nuclear factor from high endothelial venules; NF-HEV; 874F7

**UniProt Accession Number of Target Protein:** O95760

**Published Application(s):** functional assay, inhibit, neutralize, Block, ELISA

**Published Species Reactivity:** Human, Cynomolgus Monkey, Mouse

**Immunogen:** The original mouse antibody was generated by immunizing BALB/c mice intraperitoneally with recombinantly expressed human IL-33-his tagged protein. The humanized version was generated by grafting CDRs of the original mouse antibody onto human framework regions.

**Specificity:** This antibody binds an epitope between amino acid residues 41-70 of the human IL-33. This antibody can also cross react with mouse and cynomolgus monkey IL-33. Interleukin 33 (IL-33) is a multifunctional cytokine which is constitutively expressed in structural cells such as smooth muscle cells, fibroblasts, mast cells, dendritic cells, macrophages, osteoblasts, epithelial cells, and endothelial cells. It is involved in the maturation of Th2 cells inducing the secretion of T-helper type 2-associated cytokines like IL-4, IL-5 and IL-13. It is also involved in activation of mast cells, basophils, eosinophils and natural killer cells. A study found that IL-33 is a bifunctional protein. On the one hand, IL-33 is localized in the nucleus and acts as a transcription factor; on the other hand, IL-33 is secreted outside the cell and acts as a cytokine by interacting with its receptor ST2.

**Application Notes:** The binding characterization and determination of cross-reactivity of this antibody to human, mouse and cynomolgus monkey IL-33 was done using ELISA. This antibody binds human, mouse and cynomolgus monkey IL-33 with a binding affinity of  $K_d=1.13$  nM,  $K_d=0.332$  nM and  $K_d=1.12$  nM respectively. This antibody can block the binding of IL-33 to its receptor ST2 with an  $IC_{50}$  of 0.451 nM. This antibody can effectively inhibit IL-33 induced 16-6 expression in HUVEC cells, IL-5 and IL-13 secretion by KU812 cells. This antibody also showed inhibitory effect on IL-33 induced PBMC and NK cells secretion of IFN gamma. This antibody was reported to effectively inhibit mouse peripheral blood IL-15 secretion in vivo.

This antibody could also inhibit the number of eosinophils stimulated by human IL-33 in the peripheral blood of mice. The in vivo pharmacodynamic activity of this antibody was studied using spleen weighing assay (WO2022063281).

**Antibody First Published in:** [PMID:](#)

**Note on publication:**

## Product Form

**Size:** 1 mg Purified antibody in bulk size.

**Purification:** Protein A affinity purified

**Supplied In:** PBS only.

**Storage Recommendation:** Store at 4°C for up to 3 months. Note, this antibody is provided without added preservatives, it is therefore recommended this antibody be handled under sterile conditions. For longer storage, aliquot and store at -20°C.

**Concentration:** 1 mg/ml.

Important note - This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.