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# Functional IL-33 (mouse) Antibody, mAb (recombinant)

**Catalog # ADP0045**

## Specification

### Functional IL-33 (mouse) Antibody, mAb (recombinant) - Product Information

| | |
|---|---|
| Application | **WB, E** |
| Primary Accession | Q8BVZ5 |
| Reactivity | **Mouse** |
| Host | **Purified From HEK 293 Cell culture Supernatant.** |
| Clonality | **Monoclonal** |
| Isotype | **Human IgG2λ** |
| Gene Source | **Mouse** |
| Application Note | **E,WB(1:1000)** |
| Calculated MW | **29991** |
| Description | **anti-IL-33 (mouse), monoclonal antibody (recombinant) (Carly-1-4) is composed of human variable regions (VH and VL) (λ-chain) of immunoglobulin fused to the human IgG2 Fc domain.** |

### Functional IL-33 (mouse) Antibody, mAb (recombinant) - Additional Information

**Gene ID** 77125

**Other Names**
Interleukin-33; IL-1F11; NF-HEV

**Target/Specificity**
Recognizes mouse IL-33.

**Format**
Liquid. In PBS containing 10% glycerol and 0.02% sodium azide.

**Reconstitution & Storage**
Stable for at least 1 year after receipt when stored at -20°C.

**Precautions**
Functional IL-33 (mouse) Antibody, mAb (recombinant) is for research use only and not for use in diagnostic or therapeutic procedures.

### Functional IL-33 (mouse) Antibody, mAb (recombinant) - Protein Information

**Name** Il33 {ECO:0000312|MGI:MGI:1924375}

**Function**
Cytokine that binds to and signals through the IL1RL1/ST2 receptor which in turn activates NF-kappa-B and MAPK signaling pathways in target cells (PubMed:<a

href="http://www.uniprot.org/citations/29045903" target="_blank">29045903</a>). Involved in the maturation of Th2 cells inducing the secretion of T-helper type 2-associated cytokines (By similarity). Also involved in activation of mast cells, basophils, eosinophils and natural killer cells (By similarity). Acts as an enhancer of polarization of alternatively activated macrophages (By similarity). Acts as a chemoattractant for Th2 cells, and may function as an 'alarmin', that amplifies immune responses during tissue injury (By similarity). Induces rapid UCP2-dependent mitochondrial rewiring that attenuates the generation of reactive oxygen species and preserves the integrity of Krebs cycle required for persistent production of itaconate and subsequent GATA3-dependent differentiation of inflammation-resolving alternatively activated macrophages (PubMed:<a href="http://www.uniprot.org/citations/34644537" target="_blank">34644537</a>).

**Cellular Location**
Nucleus. Chromosome {ECO:0000250|UniProtKB:O95760}. Cytoplasm {ECO:0000250|UniProtKB:O95760}. Cytoplasmic vesicle, secretory vesicle {ECO:0000250|UniProtKB:O95760}. Secreted. Note=Secreted and released in the extracellular milieu by passing through the gasdermin-D (GSDMD) pore following cleavage by CELA1 (PubMed:35794369, PubMed:35749514) Associates with heterochromatin and mitotic chromosomes (By similarity). The secretion is dependent on protein unfolding and facilitated by the cargo receptor TMED10; it results in protein translocation from the cytoplasm into the ERGIC (endoplasmic reticulum- Golgi intermediate compartment) followed by vesicle entry and secretion (By similarity). {ECO:0000250|UniProtKB:O95760, ECO:0000269|PubMed:35749514, ECO:0000269|PubMed:35794369}

## Functional IL-33 (mouse) Antibody, mAb (recombinant) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## Functional IL-33 (mouse) Antibody, mAb (recombinant) - Images

## Functional IL-33 (mouse) Antibody, mAb (recombinant) - Background

Interleukin-33 (IL-33; HF-NEV; IL-1F11), a member of the IL-1 family of cytokines, is expressed by many cell types following pro-inflammatory stimulation and is thought to be released upon cell lysis. IL-33 binds to and signals through ST2 (IL-1R1) and its stimulation recruits MYD88, IRAK, IRAK4 and TRAF6, followed by phosphorylation of ERK1 (MAPK3)/ERK2 (MAPK1), p38 (MAPK14) and JNK. The ability of IL-33 to target numerous immune cell types, like Th2-like cells, mast cells and B1 cells, and to induce cytokine and chemokine production underlines its potential in influencing the outcome of a wide range of diseases, such as arthritis, asthma, atopic allergy & anaphylaxis, cardiovascular disease/atherosclerosis, nervous system diseases and sepsis. Anti-IL-33, mAb (recombinant) (Carly-1-4) is an antibody developed by antibody phage display technology using a human naive antibody gene library. These libraries consist of scFv (single chain fragment variable) composed of VH (variable domain of the human immunoglobulin heavy chain) and VL (variable domain of the human immunoglobulin light chain) connected by a polypeptide linker. The antibody fragments are displayed on the surface of filamentous bacteriophage (M13). This scFv was selected by affinity selection on antigen in a process termed panning. Multiple rounds of panning are performed to enrich for antigen-specific scFv-phage. Monoclonal antibodies are subsequently identified by screening after each round of selection. The selected monoclonal scFv is cloned into

an appropriate vector containing a Fc portion of interest and then produced in mammalian cells to generate an IgG like scFv-Fc fusion protein.