

Anti- IL-18 Monoclonal Antibody

Catalog # ABO15028

Product Information

Application	WB
Primary Accession	P70380
Host	Rat
Isotype	Rat IgG2a, κ
Reactivity	Mouse
Clonality	Monoclonal
Format	Lyophilized
Description	Anti- IL-18 Monoclonal Antibody . Tested in WB applications. This antibody reacts with Mouse.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500 μ g/ml.

Additional Information

Gene ID	16173
Other Names	Interleukin-18, IL-18, Interferon gamma-inducing factor, IFN-gamma-inducing factor, Interleukin-1 gamma, IL-1 gamma, Il18 {ECO:0000312 MGI:MGI:107936}, Igif
Calculated MW	22135
Application Details	Western blot, 0.25-0.5 μ g/ml, Mouse
Source	Eukaryota
Protein Name	Interleukin-18
Contents	PBS, pH 7.0. Contains no stabilizers or preservatives
Clone Names	Clone: AGOO-9
Immunogen	Not available or unknown
Purification	Immunogen affinity purified.
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

Name	Il18 {ECO:0000312 MGI:MGI:107936}
Synonyms	Igif

Function

Pro-inflammatory cytokine primarily involved in epithelial barrier repair, polarized T-helper 1 (Th1) cell and natural killer (NK) cell immune responses (PubMed:[26638072](#), PubMed:[26638073](#)). Upon binding to IL18R1 and IL18RAP, forms a signaling ternary complex which activates NF-kappa-B, triggering synthesis of inflammatory mediators (By similarity). Synergizes with IL12/interleukin-12 to induce IFNG synthesis from T-helper 1 (Th1) cells and natural killer (NK) cells (By similarity). Involved in transduction of inflammation downstream of pyroptosis: its mature form is specifically released in the extracellular milieu by passing through the gasdermin-D (GSDMD) pore (PubMed:[30392956](#)).

Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:Q14116}. Secreted. Note=The precursor is cytosolic (By similarity). In response to inflammasome-activating signals, cleaved and secreted (By similarity). Mature form is secreted and released in the extracellular milieu by passing through the gasdermin-D (GSDMD) pore (PubMed:[30392956](#)). In contrast, the precursor form is not released, due to the presence of an acidic region that is proteolytically removed by CASP1 during maturation (By similarity). The secretion is dependent on protein unfolding and facilitated by the cargo receptor TMED10 (By similarity). {ECO:0000250|UniProtKB:Q14116, ECO:0000269|PubMed:[30392956](#)}

Background

Interleukin-18 also known as IL18 is a protein which in humans is encoded by the IL18 gene. The protein encoded by this gene is a proinflammatory cytokine. IL-18 is a cytokine produced by macrophages and other cells that belongs to the IL-1 superfamily. IL-18 works by binding to the interleukin-18 receptor, and together with IL-12 it induces cell-mediated immunity following infection with microbial products like lipopolysaccharide (LPS). After stimulation with IL-18, natural killer (NK) cells and certain T cells release another important cytokine called interferon-gamma (IFN-gamma) or type II interferon that plays an important role in activating the macrophages or other cells. The combination of this cytokine and IL12 has been shown to inhibit IL4 dependent IgE and IgG1 production, and enhance IgG2a production in B cells. IL-18 binding protein (IL18BP) can specifically interact with this cytokine, and thus negatively regulate its biological activity. The human interleukin 18 gene IL18 maps to 11q22.2-q22.3, closely linked to the DRD2 gene locus and distinct from mapped IDDM loci.

Images

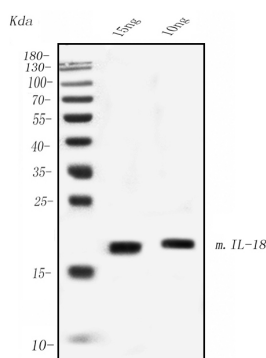


Figure 1. Western blot analysis of IL-18 using anti-IL-18 antibody (M00124).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. Lane 1: recombinant mouse IL-18 protein 15ng, Lane 2: recombinant mouse IL-18 protein 10ng. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rat anti-IL-18 antigen affinity purified monoclonal antibody (Catalog # M00124) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rat IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.