

PRODUCT INFORMATION



Interleukin-18 Rabbit Monoclonal Antibody (Clone 011)

Item No. 38092

Overview and Properties

Contents:	This vial contains 50 or 100 µl, or 1 ml of protein A-affinity purified monoclonal antibody.
Synonyms:	IFN-γ-inducing Factor, IGIF, IL-18, IL-1γ, Interferon Gamma-inducing Factor, Interleukin-1γ
Immunogen:	Recombinant human IL-18
Cross Reactivity:	(+) IL-18
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-80°C (as supplied)
Stability:	≥1 year
Storage Buffer:	0.2 µm filtered solution in PBS
Clone:	011
Host:	Rabbit
Isotype:	IgG
Applications:	ELISA and ELISA(CAP); the recommended starting dilution is 1:5,000-1:10,000 for ELISA and 1:250-1:2,000 for ELISA (CAP). Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Description

Interleukin-18 (IL-18) is a pro-inflammatory cytokine and member of the IL-1 cytokine family.^{1,2} It is synthesized as an inactive precursor peptide, pro-IL-18, in macrophages, dendritic cells, Kupffer cells, keratinocytes, chondrocytes, synovial fibroblasts, and osteoblasts, where it is cleaved by inflammasome-activated caspase-1 to form active IL-18.^{1,3} Active IL-18 is released from cells during pyroptosis, but inactive pro-IL-18 can also be secreted from dying cells and processed extracellularly by neutrophil proteinase 3, human chymase, and granzyme B.³ IL-18 binds to IL-18 receptors (IL-18Rs) on the surface of T helper 1 (Th1) and non-polarized T cells, natural killer (NK) cells, and NKT cells to induce intracellular signaling and IFN-γ production in response to viral, bacterial, or parasitic infection.^{2,3} It also binds to mast cells and basophils in conjunction with IL-3 to induce the production of IL-4 and IL-13, respectively. Inhibition of IL-18 with anti-IL-18 sera decreases survival in various mouse models of infection.³ Circulating levels of IL-18 are increased in patients with macrophage activation syndrome (MAS) or hemophagocytic lymphohistiocytosis (HLH).⁴ Cayman's IL-18 Rabbit Monoclonal Antibody (Clone 011) can be used for ELISA and ELISA (CAP).

References

1. Arend, W.P., Palmer, G., and Gabay, C. IL-1, IL-18, and IL-33 families of cytokines. *Immunol. Rev.* **223**, 20-38 (2008).
2. Yasuda, K., Nakanishi, K., and Tsutsui, H. Interleukin-18 in health and disease. *Int. J. Mol. Sci.* **20(3)**, 649 (2019).
3. Vecchié, A., Bonaventura, A., Toldo, S., et al. IL-18 and infections: Is there a role for targeted therapies? *J. Cell. Physiol.* **236(3)**, 1638-1657 (2020).
4. Grom, A.A., Horne, A., and De Benedetti, F. Macrophage activation syndrome in the era of biologic therapy. *Nat. Rev. Rheumatol.* **12(5)**, 259-268 (2016).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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