Datasheet for ABIN964783

anti-IL-18 antibody

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Overview

Quantity:	500 µg
Target:	IL-18 (IL18)
Reactivity:	Mouse
Host:	Rabbit
Clonality:	Polyclonal
Application:	Western Blotting (WB), Immunohistochemistry (IHC), ELISA, Immunofluorescence (IF), Fluorescence Microscopy (FM)

Product Details

Purpose:	IL-18 Antibody
Immunogen:	Immunogen: The whole rabbit serum used to produce this IgG fraction antibody was prepared by repeated immunizations with native 157 aa mouse IL-18 produced in E.coli. Immunogen Type: Recombinant Protein
Isotype:	IgG
Cross-Reactivity (Details):	This antibody is primarily directed against mature 18,000 MW mouse IL-18 and is useful in determining its presence in various assays.
Characteristics:	Synonyms: rabbit anti-IL-18 antibody, rabbit anti-interleukin-18 antibody, Iboctadekin antibody, IFN gamma inducing factor antibody, IGIF antibody, IL 1 gamma antibody, IL 18 antibody, IL 1g antibody, IL-1F4, IL 18, Interleukin 18, IL18, Interleukin18, IL1 F4, IL1F4, Il18
Purification:	This is an IgG preparation of whole rabbit serum purified by protein A chromatography using a low endotoxin methodology.

Product Details

Sterility:	Sterile filtered

Target Details

Target:	IL-18 (IL18)
Alternative Name:	Il18 (IL18 Products)
Background:	Background: Interleukin-18 (IL-18) is a member of the IL-1 cytokine family and was initially identified as an Interferon-g (IFN-g) inducing factor (IGIF). The IL-18 gene was originally cloned from liver cells and has since been shown to be produced by activated monocytes/ macrophages, Kupffer cells, keratinocytes, glucocorticoid-secreting adrenal cortex cells, osteoblasts and dendritic cells. IL-18 is a 24 kDa, non-glycosylated polypeptide that lacks a classical signal sequence and possesses a structure recognizably similar to IL-1. IL-18 is synthesized as a bio-inactive propeptide that undergoes proteolytic cleavage by either ICE (interleukin-1 beta converting enzyme) or another caspase to generate a mature, bioactive, 18 kDa molecule. In both the mature and propeptide forms, IL-18 shows 64 % aa sequence identity from mouse to human. IL-18 does not appear to show any primary sequence similarity to any other known cytokines. Rat IL-18 has also been isolated, and found to be 194 aa in length with a 91 % aa sequence identity to mouse IL-18. Human IL-18 has been found to induce the production of IFN-g and GM-CSF while inhibiting the production of IL-10 by PBMC. With respect to human T cells, IL-18 enhances Th1 cytokine production and stimulates cell proliferation via an IL-2-dependent pathway. Human IL-18 can also inhibit the synthesis of IgE by B cells. Thus, IL-18 plays an important role in immunological and inflammatory reactions. Currently, the bioactivity of human IL-18 is often determined by its capacity to augment the levels of IFN-g produced by T cells as measured in tissue culture supernatants.
Gene ID:	16173
UniProt:	P70380
Pathways:	Cellular Response to Molecule of Bacterial Origin, Activated T Cell Proliferation, Cancer Immune Checkpoints, Inflammasome

Application Details

Application Notes:	Immunohistochemistry Dilution: User Optimized Application Note: Anti-Mouse IL-18 has been tested in immunohistochemistry and immunofluorescence and is suitable for use in neutralizations, ELISA, and immunoblotting. Although untested, this reagent may be useful for radioimmunoassays, flow cytometry and

Application Details

	immunoprecipitation. It recognizes the 18,000 MW mature (active) IL-18. Reactivity in other immunoassays is unknown. Neutralization Dilution: User Optimized Western Blot Dilution: 1:500 - 1:2,000 ELISA Dilution: 1:1,000 - 1:5,000 IF Microscopy Dilution: 1:50-1:200 Other: User Optimized
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1.0 mg/mL
Buffer:	Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 Stabilizer: None Preservative: None
Preservative:	Without preservative
Storage:	4 °C,-20 °C
Storage Comment:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiry Date:	12 months

Publications

Product cited in:	Quach, Song, Guo, Li, Maazi, Fung, Sands, OConnell, Restrepo-Vassalli, Chai, Nemecio, Punj, Akbari, Idos, Mumenthaler, Wu, Martin, Hagiya, Hicks, Cui, Liang: "A truncating mutation in the autophagy gene UVRAG drives inflammation and tumorigenesis in mice." in: **Nature communications**, Vol. 10, Issue 1, pp. 5681, (2020) (PubMed). Leal-Lasarte, Franco, Labrador-Garrido, Pozo, Roodveldt: "Extracellular TDP-43 aggregates target MAPK/MAK/MRK overlapping kinase (MOK) and trigger caspase-3/IL-18 signaling in microglia." in: **FASEB journal : official publication of the Federation of American Societies for**

Publications

Experimental Biology, Vol. 31, Issue 7, pp. 2797-2816, (2017) (PubMed).

Sakamuri, Valente, Siddesha, Delafontaine, Siebenlist, Gardner, Bysani: "TRAF3IP2 mediates aldosterone/salt-induced cardiac hypertrophy and fibrosis." in: **Molecular and cellular endocrinology**, Vol. 429, pp. 84-92, (2016) (PubMed).

Images

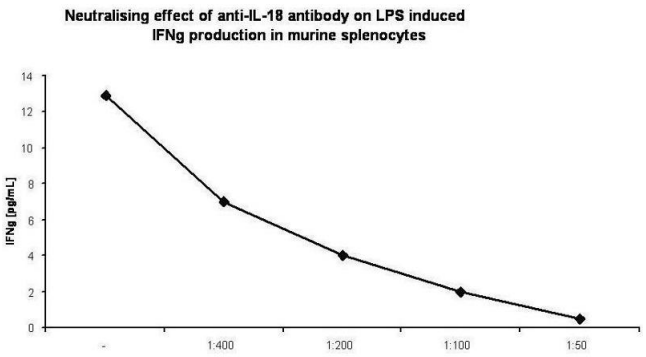
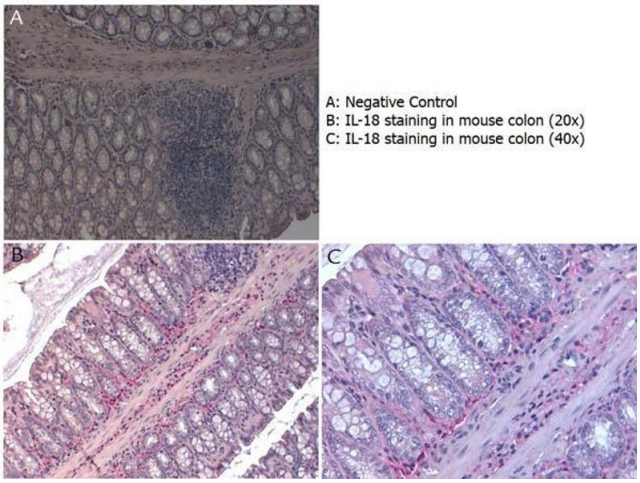


Image 1. In-vitro neutralization. Spleens were aseptically removed and cell suspensions were prepared. Cells were washed twice and resuspended in RPMI supplemented with 10% FBS. For cytokine measurement, spleen cells were cultured at 5 mln/mL in 24-well, flat-bottom culture plates in the presence of several dilutions of rabbit anti-murine IL-18 antibody (1:400; 1:200; 1:100; 1:50) and 100 ng/mL of LPS (a phenol-extracted preparation from Escherichia coli 055:B5, Sigma Chemical Co). Cultures were incubated at 37°C in a humidified atmosphere with 5% CO2. At the end of the incubation period, cultures were frozen at -70°C and subjected to 3 freeze-thaw cycles to obtain total cytokine levels. Before assaying, samples were centrifuged for 10 minutes at 10,000g to remove debris.



Immunohistochemistry

Image 2. Immunohistochemistry with anti-IL-18 antibody showing IL-18 staining in inflammatory cells of the mucous corium of mouse colon at 20x and 40x (B & C). Formalin fixed/paraffin embedded sections were subjected to heat induced epitope retrieval (HIER) at pH 6.2 and then incubated with mouse anti-IL-18 antibody at 4.0 µg/ml for 60 minutes. The reaction was developed using MACH 4 universal AP polymer detection system and visualized with WARP RED.