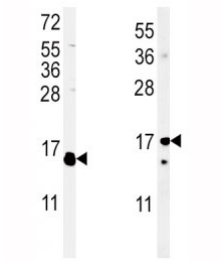
Interleukin 4 Antibody / BSF-1 Antibody (F49086)

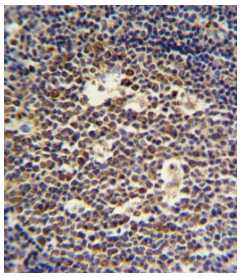
Catalog No.	Formulation	Size
F49086-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F49086-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

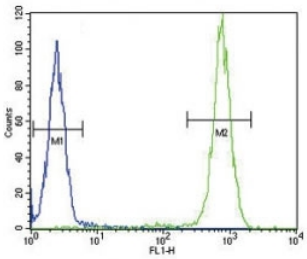
Availability	1-3 business days
Species Reactivity	Human, Mouse
Predicted Reactivity	Primate
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	P05112
Localization	Secreted
Applications	Western Blot : 1:1000 IHC (Paraffin) : 1:10-1:50 Flow Cytometry : 1:10-1:50
Limitations	This Interleukin 4 Antibody / BSF-1 Antibody is available for research use only.



Interleukin 4 Antibody Detects IL-4 in WiDr Cells and Mouse Cerebellum WB. Western blot analysis of human WiDr cell lysate (left) and mouse cerebellum lysate (right) using Interleukin 4 Antibody demonstrates prominent IL-4-reactive bands near 15-17 kDa. The observed migration is consistent with the expected approximately 14-20 kDa range for IL-4, which can vary with glycosylation. Both panels show strong target-associated signal, with an additional lower-molecular-weight band visible in the mouse cerebellum sample. These results demonstrate detection of IL-4 in human and mouse samples by this BSF-1 Antibody under Western blot conditions.



Interleukin 4 Antibody Staining in Human Tonsil IHC. Immunohistochemistry of formalin-fixed, paraffin-embedded human tonsil tissue using Interleukin 4 Antibody shows distinct brown staining distributed among cells within the lymphoid tissue. The staining is heterogeneous, with positive cells interspersed among largely unstained or more weakly stained lymphocytes, rather than uniform labeling throughout the section. This pattern demonstrates detection of IL-4, historically known as BSF-1, within human tonsil tissue.



Interleukin 4 Antibody Detection in Human WiDr Colorectal Adenocarcinoma Cells FACS. Flow cytometry analysis of human WiDr colorectal adenocarcinoma cells using Interleukin 4 Antibody shows a pronounced rightward fluorescence shift in the antibody-stained population compared with the negative control. FITC-conjugated goat anti-rabbit IgG was used for detection. The strong separation between the control and antibody-stained populations demonstrates detection of IL-4/BSF-1 in WiDr cells by flow cytometry.

Description

Interleukin 4 Antibody recognizes IL-4, a secreted cytokine encoded by the IL4 gene that plays an important role in regulating adaptive immunity and inflammatory responses. IL-4 is produced by several immune-cell populations and is particularly associated with type 2 immune responses. Originally characterized for its ability to stimulate B-cell proliferation, IL-4 was historically known as B cell stimulatory factor 1 (BSF-1). Its biological activities extend beyond B cells to influence lymphocyte differentiation, antibody responses, and the functional state of multiple immune-cell populations.

IL-4 signals through receptor complexes containing IL4RA (CD124). The type I IL-4 receptor pairs IL4RA with the common gamma chain IL2RG, while the type II receptor combines IL4RA with IL13RA1. Receptor activation stimulates JAK-family kinases and promotes STAT6 signaling, producing transcriptional changes that regulate immune-cell differentiation and function. The shared use of the type II receptor by IL-4 and IL-13 contributes to overlapping biological activities between these cytokines.

IL-4 is a major regulator of T helper 2 cell differentiation and contributes to B-cell activation and immunoglobulin class switching, including mechanisms associated with IgE production. It can also influence macrophage polarization and other aspects of tissue immune responses. These activities make IL-4 an important subject in research involving allergic inflammation, asthma, host defense, adaptive immunity, and mechanisms controlling communication between immune-cell populations. Dysregulated IL-4 signaling has consequently been investigated in numerous immune-mediated and inflammatory conditions.

This rabbit polyclonal antibody was generated against a peptide corresponding to amino acids 122-150 of human IL-4. As a BSF-1 Antibody, it provides a reagent for investigating the cytokine historically identified as B cell stimulatory factor 1 and its role in immune regulation. NSJ Bioreagents supplies this antibody for research use only. (nsjbio.com)

An Interleukin 4 Antibody can be used to investigate IL-4 expression and molecular mechanisms connecting cytokine signaling, lymphocyte differentiation, allergic inflammation, and adaptive immune responses.

Explore our Immunology Antibodies page for additional antibodies targeting cytokines and regulators of lymphocyte activation, differentiation, and immune signaling.

Application Notes

Titration of the Interleukin 4 Antibody / BSF-1 Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 122-150 from the human protein was used as the immunogen for this Interleukin 4 Antibody.

Storage

Aliquot the Interleukin 4 Antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

IL4 antibody, IL-4 antibody, interleukin 4 antibody, interleukin-4 antibody, BSF-1 antibody, BSF1 antibody, B cell stimulatory factor 1 antibody, B-cell stimulatory factor 1 antibody

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