abcam

ab325181

Anti- IL-4 antibody [EPR29904-542]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR29904-542
Purification technique	Affinity purification Protein A
Concentration	0.51 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Mouse
Dilution info	1/50 - 1/200
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/5000
Notes	-

IHC-P

Not recommended

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information Il4

Function

Cytokine secreted primarily by mast cells, T-cells, eosinophils, and basophils that plays a role in regulating antibody production, hematopoiesis and inflammation, and the development of effector T-cell responses (PubMed:3083412). Induces the expression of class II MHC molecules on resting B-cells (PubMed:3498301). Enhances both secretion and cell surface expression of IgE and IgG1 (PubMed:3498301). Also regulates the expression of the low affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes (By similarity). Positively regulates IL31RA expression in macrophages. Stimulates autophagy in dendritic cells by interfering with mTORC1 signaling and through the induction of RUFY4 (PubMed:26416964). In addition, plays a critical role in higher functions of the normal brain, such as memory and learning (PubMed:25772794, PubMed:28202615). Upon binding to IL4, IL4R receptor dimerizes either with the common IL2R gamma chain/IL2RG to produce the type 1 signaling complex, located mainly on hematopoietic cells, or with the IL13RA1 to produce the type 2 complex, which is also expressed on nonhematopoietic cells. Engagement of both types of receptors initiates JAK3 and to a lower extend JAK1 phosphorylation

leading to activation of the signal transducer and activator of transcription 6/STAT6 (PubMed:25847241, PubMed:8624821).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

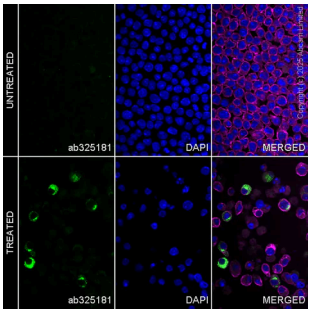
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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4 product images



Immunocytochemistry/ Immunofluorescence - Anti- IL-4 antibody [EPR29904-542] (ab325181)

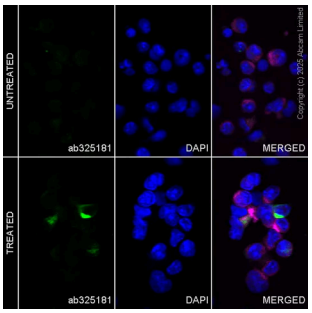
IL-4 Immunocytochemistry/ Immunofluorescence staining of EL4 (mouse lymphoma T lymphocyte) using rabbit Anti- IL-4 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized EL4 (mouse lymphoma T lymphocyte) cells labelling IL-4 with ab325181 at 1/200 (2.51 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (Green).

Confocal image showing increased cytoplasmic staining in a subset of EL4 cells (shown in green) treated with PHA (10 ug/mL) and Phorbol-12-myristate-13-acetate (10 ng/mL) for 48 hr with addition of brefeldin A (500 ng/mL) for the last 16 hr. The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

ab7291 Anti-alpha Tubulin mouse monoclonal antibody was used to counterstain tubulin at 1/1000 dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti- IL-4 antibody [EPR29904-542] (ab325181)

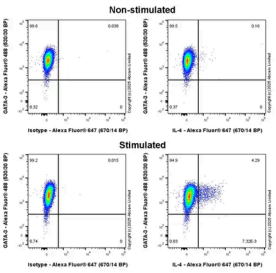
IL-4 Immunocytochemistry/ Immunofluorescence staining of Mouse PBMC (mouse peripheral blood mononuclear cell) using rabbit Anti- IL-4 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Mouse PBMC (mouse peripheral blood mononuclear cell) cells labelling IL-4 with ab325181 at 1/50 (10.04 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (Green).

Confocal image showing increased cytoplasmic staining in a subset of Th2 differentiated mouse PBMC treated with Phorbol-12-myristate-13-acetate (10 ng/mL) and Ionomycin (500 ng/mL) and Brefeldin A (300 ng/mL) for 4 hr (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Anti-human CD4 mouse monoclonal antibody (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (Magenta). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution.



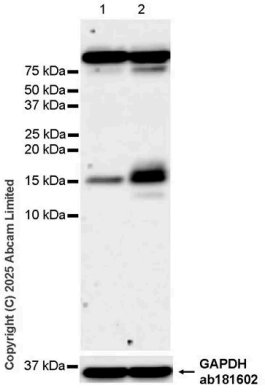
Flow Cytometry (Intracellular) - Anti- IL-4 antibody [EPR29904-542] (ab325181)

IL-4 Flow Cytometry (Intracellular) staining of Mouse CD4+ PBMC cultured under Th2-polarizing conditions for 4 days then treated with 10ng/mL PMA, 500ng/mL Ionomycin and 300ng/ml BFA for 4 hours (Lower left and right) / Mouse CD4+ PBMC cultured under Th2-polarizing conditions for 4 days (Upper left and right) using rabbit Anti- IL-4 antibody

Flow cytometric analysis of Mouse CD4+ PBMC cultured under Th2-polarizing conditions for 4 days then treated with 10ng/mL PMA, 500ng/mL Ionomycin and 300ng/ml BFA for 4 hours (Lower left and right) / Mouse CD4+ PBMC cultured under Th2-polarizing conditions for 4 days (Upper left and right) cells labelling IL-4 with ab325181 at 1/5000 dilution (0.01ug) / Upper right and Lower right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Goat anti-Rabbit IgG (Alexa Fluor® 647, ab150083) at 1/5000 dilution was used as the secondary antibody.

Gated on viable cells. Cells were co-stained with anti-GATA-3 antibody conjugated to Alexa Fluor®488.



Western blot - Anti- IL-4 antibody [EPR29904-542] (ab325181)

IL-4 Western blot staining of EL4.IL-2 treated with 10µg/ml PHA and 10ng/ml PMA for 48 hours, 500 ng/ml BFA was then added for overnight whole cell lysate using rabbit Anti- IL-4 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

The identity of the bands above 75 kDa are unknown.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:
Western blot - Anti- IL-4 antibody [EPR29904-542] (ab325181) at 1/1000 dilution

Lane 1:
Untreated EL4.IL-2 (mouse lymphoma T lymphocyte) whole cell lysate at 20 µg

Lane 2:
EL4.IL-2 treated with 10µg/ml PHA and 10ng/ml PMA for 48 hours, 500 ng/ml BFA was then added for overnight whole cell lysate at 20 µg

Secondary

All lanes:

Western blot at 1/20000 dilution

Observed band size: 15 kDa, 36 kDa

Exposure time: 70s

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