abcam

ab227037

Anti-IL-9 antibody [EPR23484-151]

Recombinant | RabMAb

Key facts

Isotype	IgG1
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	EPR23484-151
Purification technique	Affinity purification Protein A
Concentration	0.475 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Mouse
Dilution info	1/30
Notes	-

Expected

Species	Rat, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/500

Notes	-

Expected

Species	Rat
Dilution info	-
Notes	-

Species	Mouse
Dilution info	1/500
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Expected

Species	Rat
Dilution info	-
Notes	-

Species	Mouse
Dilution info	1/500
Notes	-

Target data

See full target information IL9

Function	Multifunctional cytokine secreted mainly by T-helper 2 lymphocytes and also mast cells or NKT cells that plays important roles in the immune response against parasites (PubMed:29742432). Affects intestinal epithelial permeability and adaptive immunity (PubMed:29742432). In addition, induces the differentiation of

specific T-cell subsets such as IL-17 producing helper T-cells (TH17) and also proliferation and differentiation of mast cells. Mechanistically, exerts its biological effects through a receptor composed of IL9R subunit and a signal transducing subunit IL2RG. Receptor stimulation results in the rapid activation of JAK1 and JAK3 kinase activities leading to STAT1, STAT3 and STAT5-mediated transcriptional programs. Induction of differentiation genes seems to be mediated by STAT1 alone, while protection of cells from apoptosis depends on STAT3 and STAT5.

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.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Interleukin-9 (IL-9) sometimes known as a T-cell growth factor is a cytokine with a molecular mass of approximately 14-19 kDa. It is primarily expressed by T helper cells particularly Th2 and Th9 cells. IL-9 comes from the IL-9 gene and plays a

	significant role in the immune system by affecting various cell types such as mast cells B cells and epithelial cells. Researchers first identified it in the late 1980s and it has continued to be an area of interest due to its diverse functions.
Biological function summary	IL-9 influences immune responses and is important for various processes including cell proliferation and survival. IL-9 activates mast cells which play role in allergy response. It also affects the growth and differentiation of T cells and enhances the function of dendritic cells. IL-9 operates individually and not as part of a larger complex but works closely with its receptor IL-9R to initiate downstream signaling events.
Pathways	Cytokine signaling pathways and JAK-STAT signaling pathways integrate IL-9's function in the immune system. IL-9 activates the JAK-STAT pathway particularly involving proteins like JAK1 and STATs to relay signals that promote immune cell growth and survival. This cytokine also interlinks with other cytokines such as IL-4 and IL-13 playing role in immune regulation and inflammatory responses.
Associated diseases and disorders	IL-9 shows strong correlation with asthma and certain types of cancers particularly Hodgkin's lymphoma. In asthma overproduction of IL-9 can lead to increased mucus production and airway hyperresponsiveness. This relationship makes it a potential target for blocking therapies in asthma treatment. Higher levels of IL-9 correlate with poorer prognosis in some cancers indicating its potential role in tumor growth and immune evasion possibly interacting with IL-6 in such conditions.

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

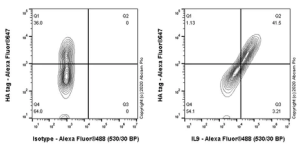
We do not recommend this combination. It is not covered by our product promise.

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:

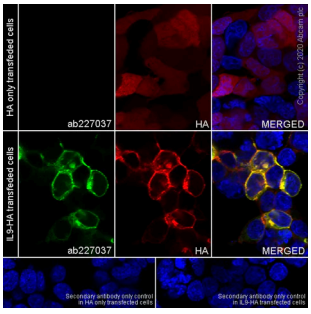
6 product images



Flow Cytometry (Intracellular) - Anti-IL-9 antibody [EPR23484-151] (ab227037)

IL-9 Flow Cytometry (Intracellular) staining using rabbit Anti-IL-9 antibody

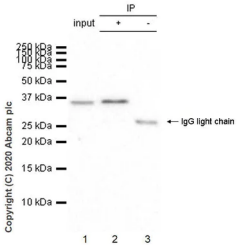
Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized 293T (Human embryonic kidney epithelial cell) transfected with HA tagged mouse IL9 construct cells labelling IL-9 with ab227037 at 1/500 dilution (0.1µg) (Right) compared with a Rabbit monoclonal IgG (ab172730) isotype control (Left). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-IL-9 antibody [EPR23484-151] (ab227037)

IL-9 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-IL-9 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized 293T (Human embryonic kidney epithelial cell) transfected with HA tagged mouse IL9 construct cells labelling IL-9 with ab227037 at 1/500 dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 2 µg/ml dilution (Green). Confocal image showing strong membranous and cytoplasmic staining in 293T cells transfected with HA tagged mouse IL9 construct. anti-HA.11 Epitope Tag mouse monoclonal antibody (Alexa Fluor® 647) was used to counterstain tubulin at 1/200 dilution (Red). The nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 2 µg/ml dilution.



Immunoprecipitation - Anti-IL-9 antibody [EPR23484-151] (ab227037)

IL-9 was immunoprecipitated from 0.35 mg mouse spleen tissue lysate 10µg with ab227037 at 1/30 dilution (2µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab227037 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.
Lane 1: Mouse spleen tissue lysate 10µg

Lane 2: ab227037 IP in mouse spleen tissue lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab227037 in mouse spleen tissue lysate

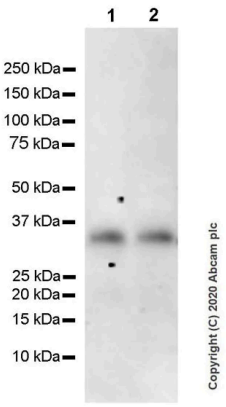
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 3 minutes.

This blot was developed using a higher sensitivity ECL substrate.

All lanes:
Immunoprecipitation - Anti-IL-9 antibody [EPR23484-151] (ab227037)

Predicted band size: 15 kDa



Western blot - Anti-IL-9 antibody [EPR23484-151] (ab227037)

IL-9 Western blot staining using rabbit Anti-IL-9 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
This blot was developed using a higher sensitivity ECL substrate.

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 9806735).

Exposure time: 3 minutes.

All lanes:
Western blot - Anti-IL-9 antibody [EPR23484-151] (ab227037) at 1/1000 dilution

Lane 1:
Mouse spleen tissue lysate at 60 µg

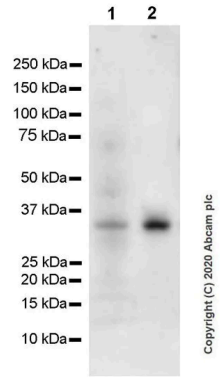
Lane 2:
Mouse thymus tissue lysate at 60 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/50000 dilution

Predicted band size: 15 kDa

Observed band size: 30 kDa



Western blot - Anti-IL-9 antibody [EPR23484-151] (ab227037)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
This blot was developed using a higher sensitivity ECL substrate.

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 9806735).

Exposure time: 104 seconds.

All lanes:
Western blot - Anti-IL-9 antibody [EPR23484-151] (ab227037) at 1/1000 dilution

Lane 1:
Rat spleen tissue lysate at 60 µg

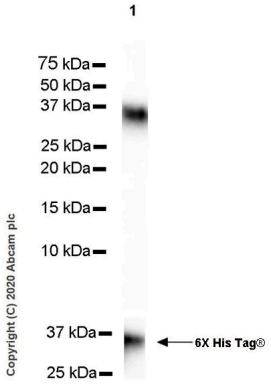
Lane 2:
Rat thymus tissue lysate at 60 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/50000 dilution

Predicted band size: 15 kDa

Observed band size: 30 kDa



Western blot - Anti-IL-9 antibody [EPR23484-151] (ab227037)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 9806735).

Exposure time: 10 seconds.

All lanes:
Western blot - Anti-IL-9 antibody [EPR23484-151] (ab227037) at 1/1000 dilution

All lanes:
His-tagged mouse IL9 recombinant protein, 10 ng

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 15 kDa

Observed band size: 30 kDa

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