abcam

ab251504

Anti-Galectin 3 antibody [EPR19244] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR19244
Purification technique	Affinity purification Protein A
Concentration	0.924 - 1.02 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-

Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information LGALS3

Function	Galactose-specific lectin which binds IgE. May mediate with the alpha-3, beta-1 integrin the stimulation by CSPG4 of endothelial cells migration. Together with DMBT1, required for terminal differentiation of columnar epithelial cells during early embryogenesis (By similarity). In the nucleus: acts as a pre-mRNA splicing factor. Involved in acute inflammatory responses including neutrophil activation and adhesion, chemoattraction of monocytes macrophages, opsonization of apoptotic neutrophils, and activation of mast cells. Together with TRIM16, coordinates the recognition of membrane damage with mobilization of the core autophagy regulators ATG16L1 and BECN1 in response to damaged endomembranes.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab251504 is the carrier-free version of ab209344.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody

preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	Galectin-3 also known as LGALS3 is a protein belonging to the galectin family which are beta-galactoside-binding lectins. This protein has a molecular weight of about 30 kDa. It shows expression in various tissues including the heart liver and gastrointestinal tract. Galectin-3 plays a mechanical role in cell-cell adhesion cell-matrix interactions and modulating immune responses. Researchers often use galectin-3 ELISA kits to quantify its presence in different biological samples.
Biological function summary	Galectin-3 participates in cell growth regulation apoptosis and immune system modulation. Galectin-3 does not typically integrate into larger molecular complexes but it interacts with a variety of cell surface and extracellular matrix molecules. Its function influences processes like cell differentiation and angiogenesis where it can act as a regulator leveraging its ability to bind glycans on cell surfaces and matrix components.
Pathways	Galectin-3 contributes to the regulation of pathways such as the MAPK signaling pathway and the Wnt signaling pathway. In the MAPK pathway it influences cell proliferation and survival. Galectin-3 interacts with proteins like β-catenin in the Wnt pathway assisting in transcriptional regulation and cell fate determination. These pathways are vital for maintaining cellular homeostasis and responding to extracellular signals.
Associated diseases and disorders	Galectin-3 has a strong connection to cancer and fibrosis. Its role in cancer involves promoting tumor cell survival metastasis and angiogenesis where it interacts with proteins like integrins to facilitate tumor progression. In fibrosis galectin-3 contributes to fibrotic tissue formation especially in conditions like idiopathic pulmonary fibrosis and cardiac fibrosis often associated with proteins such as TGF-β. Understanding these interactions helps in developing therapeutic strategies targeting galectin-3 in these diseases.

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.

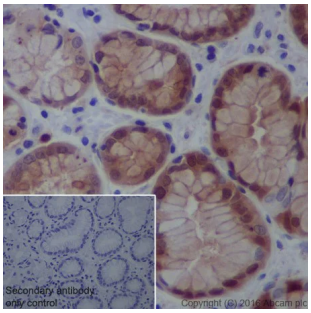
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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12 product images



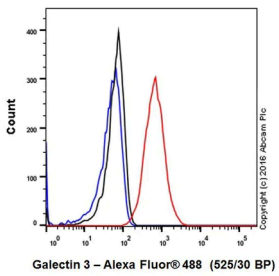
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Galectin 3 antibody [EPR19244] - BSA and Azide free (ab251504)

Galectin 3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Galectin 3 antibody

This data was developed using ab209344, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded human stomach tissue labeling Galectin 3 with ab209344 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Cytoplasmic and nuclear staining on human stomach is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

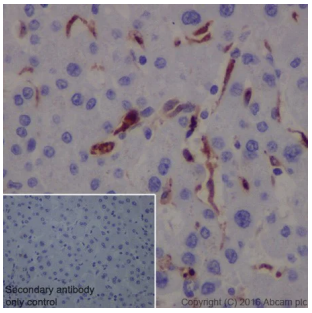
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Galectin 3 antibody [EPR19244] - BSA and Azide free (ab251504)

Galectin 3 Flow Cytometry (Intracellular) staining using rabbit Anti-Galectin 3 antibody

This data was developed using ab209344, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling Galectin 3 with ab209344 at 1/50 dilution (red) compared with a rabbit monoclonal IgG isotype control (ab172730; black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody.



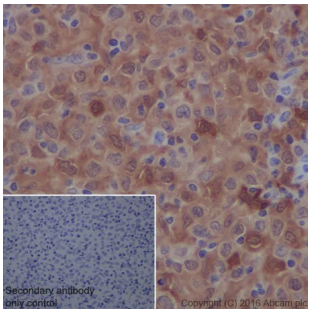
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Galectin 3 antibody [EPR19244] - BSA and Azide free (ab251504)

Galectin 3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Galectin 3 antibody

This data was developed using ab209344, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded human liver tissue labeling Galectin 3 with ab209344 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Positive staining on Kupffer cells in the liver is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



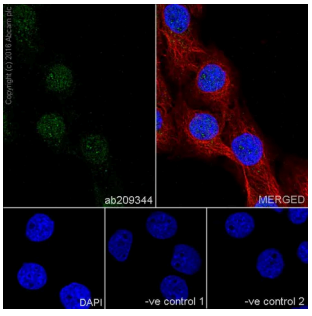
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Galectin 3 antibody [EPR19244] - BSA and Azide free (ab251504)

Galectin 3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Galectin 3 antibody

This data was developed using ab209344, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded human diffuse large B cell lymphoma tissue labeling Galectin 3 with ab209344 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Cytoplasmic and weak nuclear staining on human diffuse large B cell lymphoma is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



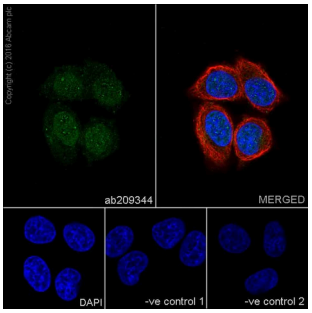
Immunocytochemistry/ Immunofluorescence - Anti-Galectin 3 antibody [EPR19244] - BSA and Azide free (ab251504)

Galectin 3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Galectin 3 antibody

This data was developed using ab209344, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized A431 (Human epidermoid carcinoma cell line) cells labeling Galectin 3 with ab209344 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing nuclear and weakly cytoplasmic staining on A431 cell line. The nuclear counter stain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin mouse MAb (ab7291) at 1/1000 dilution and Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (ab150120) secondary antibody at 1/1000 dilution (red).

The negative controls are as follows:
-ve control 1: ab209344 at 1/500 dilution followed by ab150120 Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (ab150120) secondary antibody at 1/1000 dilution.
-ve control 2: Anti-alpha Tubulin mouse MAb (ab7291) at 1/1000 dilution followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.



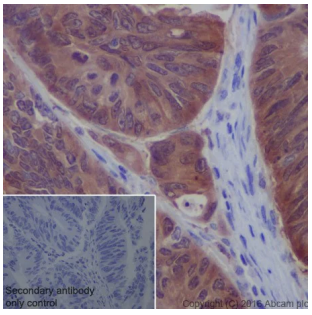
Immunocytochemistry/ Immunofluorescence - Anti-Galectin 3 antibody [EPR19244] - BSA and Azide free (ab251504)

Galectin 3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Galectin 3 antibody

This data was developed using ab209344, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling Galectin 3 with ab209344 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L(Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing nuclear and weak cytoplasmic staining on HeLa cell line. The nuclear counter stain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin mouse MAb (ab7291) at 1/1000 dilution and Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (ab150120) secondary antibody at 1/1000 dilution (red).

The negative controls are as follows:
-ve control 1: ab209344 at 1/500 dilution followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (ab150120) secondary antibody at 1/1000 dilution.
-ve control 2: Anti-alpha Tubulin mouse MAb (ab7291) at 1/1000 dilution followed by Goat Anti-Rabbit IgG H&L(Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.



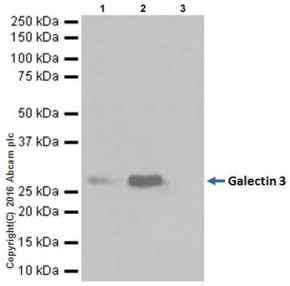
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Galectin 3 antibody [EPR19244] - BSA and Azide free (ab251504)

Galectin 3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Galectin 3 antibody

This data was developed using ab209344, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded human colon cancer tissue labeling Galectin 3 with ab209344 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Cytoplasmic and weak nuclear staining on human colon cancer is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-Galectin 3 antibody [EPR19244] - BSA and Azide free (ab251504)

This data was developed using ab209344, the same antibody clone in a different buffer formulation.
Galectin 3 was immunoprecipitated from 0.35 mg of HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate with ab209344 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab209344 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.

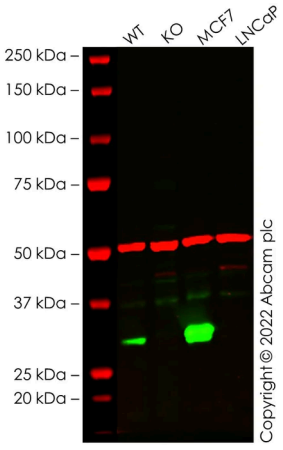
Lane 1: HeLa whole cell lysate 10µg (Input).
Lane 2: ab209344 IP in HeLa whole cell lysate.
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab209344 in HeLa whole cell lysate.

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

Exposure time: 8 seconds.

All lanes:
Immunoprecipitation - Anti-Galectin 3 antibody [EPR19244] (ab209344)

Predicted band size: 26 kDa



Western blot - Anti-Galectin 3 antibody [EPR19244] - BSA and Azide free (ab251504)

False colour image of Western blot: Anti-Galectin 3 antibody [EPR19244] staining at 1/1000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] (ab7291) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab209344 was shown to bind specifically to Galectin 3. A band was observed at 30 kDa in wild-type A549 cell lysates with no signal observed at this size in LGALS3 knockout cell line. To generate this image, wild-type and LGALS3 knockout A549 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution. This data was developed using ab209344, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-Galectin 3 antibody [EPR19244] (ab209344) at 1/1000 dilution

Lane 1:
Wild-type A549 cell lysate at 20 µg

Lane 2:
LGALS3 knockout A549 cell lysate at 20 µg

Lane 3:
MCF7 cell lysate at 20 µg

Lane 4:
LNCaP cell lysate at 20 µg

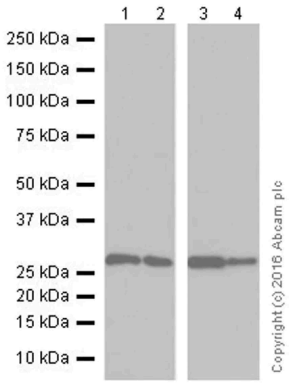
Secondary

All lanes:
Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 26 kDa

Observed band size: 30 kDa



Western blot - Anti-Galectin 3 antibody [EPR19244] - BSA and Azide free (ab251504)

Galectin 3 Western blot staining using rabbit Anti-Galectin 3 antibody

This data was developed using ab209344, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

Exposure times: Lanes 1-2: 30 seconds; Lanes 3-4: 8 seconds.

Lanes 1 - 2:
Western blot - Anti-Galectin 3 antibody [EPR19244] (ab209344) at 1/10000 dilution

Lanes 3 - 4:
Western blot - Anti-Galectin 3 antibody [EPR19244] (ab209344) at 1/1000 dilution

Lane 1:
HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 10 µg

Lane 2:
SW480 (Human colorectal adenocarcinoma cell line) whole cell lysate at 10 µg

Lane 3:
MCF7 (Human breast adenocarcinoma cell line) whole cell lysate at 10 µg

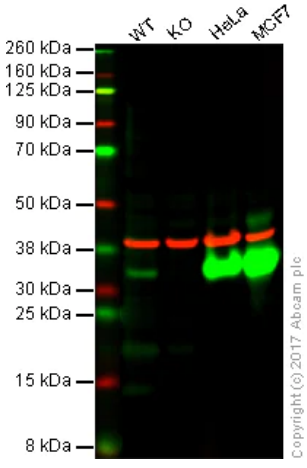
Lane 4:
A431 (Human epidermoid carcinoma cell line) whole cell lysate at 10 µg

Secondary

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

Predicted band size: 26 kDa

Observed band size: 26 kDa



Western blot - Anti-Galectin 3 antibody [EPR19244] - BSA and Azide free (ab251504)

Galectin 3 Western blot staining using rabbit Anti-Galectin 3 antibody

This data was developed using ab209344, the same antibody clone in a different buffer formulation.
Lane 1: Wild-type HAP1 whole cell lysate (20 µg)

Lane 2: alectin 3 (KO) knockout HAP1 whole cell lysate (20 µg)

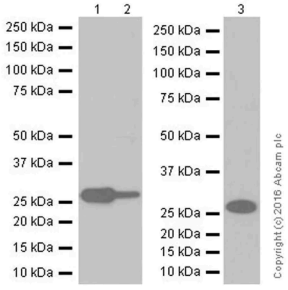
Lane 3: HeLa whole cell lysate (20 µg)

Lane 4: MCF7 whole cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab209344 observed at 35 kDa. Red - loading control, ab8245, observed at 37 kDa.

ab209344 was shown to specifically react with Galectin 3 (KO) in wild-type HAP1 cells. No band was observed when LGALS3 (KO) knockout samples were examined. Wild-type and Galectin 3 (KO) knockout samples were subjected to SDS-PAGE. ab209344 and ab8245 (Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/10,000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ab216776 secondary antibodies at 1/20,000 dilution for 1 hour at room temperature before imaging.
All lanes:
Western blot - Anti-Galectin 3 antibody [EPR19244] (ab209344)

Predicted band size: 26 kDa



Western blot - Anti-Galectin 3 antibody [EPR19244] - BSA and Azide free (ab251504)

Galectin 3 Western blot staining using rabbit Anti-Galectin 3 antibody

This data was developed using ab209344, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

Exposure times: Lanes 1-2: 15 seconds; Lane 3: 30 seconds.

All lanes:
Western blot - Anti-Galectin 3 antibody [EPR19244] (ab209344) at 1/1000 dilution

Lane 1:
Human heart tissue at 10 µg

Lane 2:
Human kidney tissue at 10 µg

Lane 3:
Human stomach tissue at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/10000 dilution

Predicted band size: 26 kDa

Observed band size: 26 kDa

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