abcam

ab138513

# Anti-Galectin 1 antibody [EPR3206(2)]

Anti-Galectin 1 antibody [EPR3206(2)] (ab138513) is a rabbit monoclonal antibody detecting Galectin 1 in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- KO validated for confirmed specificity
- Biophysical QC for unrivalled batch-batch consistency
- Over 10 publications

Recombinant | RabMAb | KO Validated | 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** | EPR3206(2) |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.262 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## IHC-P

**Tested**

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/16000 |
| **Notes** | Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. |

### Not recommended

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/10000 |
| **Notes** | - |

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/10000 |
| **Notes** | - |

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | 1/10000 |
| **Notes** | - |

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/50 |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/30 |
| **Notes** | ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. |

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## Target data

See full target information LGALS1

| | |
|---|---|
| **Function** | Lectin that binds beta-galactoside and a wide array of complex carbohydrates. Plays a role in regulating apoptosis, cell proliferation and cell differentiation. Inhibits CD45 protein phosphatase activity and therefore the dephosphorylation of Lyn kinase. Strong inducer of T-cell apoptosis. Plays a negative role in Th17 cell differentiation via activation of the receptor CD69 (PubMed:24752896). |

## Storage

| | |
|---|---|
| **Shipped at conditions** | Conditional Ambient |
| **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

**What is this antibody validated in?**
Anti-Galectin 1 antibody [EPR3206(2)] (ab138513) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

**What is the molecular weight of Galectin 1?**
Anti-Galectin 1 [EPR3206(2)] (ab138513) specifically detects a band for Galectin 1 (UniProt: P09382) at a molecular weight of 15kDa.

**Trusted by the scientific community**
Anti-Galectin 1 [EPR3206(2)] (ab138513) was first used in a scientific publication in 2012 and has been cited over 10 times in peer-reviewed journals.

**Specificity confirmed**
The specificity of Anti-Galectin 1 antibody [EPR3206(2)] (ab138513) has been confirmed by Western blot testing in LGALS1 Knockout HAP1 cell line, ab266850.

**Other related products**
We have a range of other formats of antibody clone [EPR3206(2)] also available for your convenience: ab138513, Carrier free - ab240111, Carrier free - ab242956, APC - ab310826, PE - ab310902, Alexa Fluor® 488 - ab310973, Alexa Fluor® 555 - ab313178

**Trial sizes available!**
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

**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**

| | |
|---|---|
| | Galectin-1 also referred to as GAL1 or galectin 1 is a protein with a molecular mass of approximately 14.5 kDa. It belongs to a group called the beta-galactoside-binding lectins and is typically characterized by its distinct carbohydrate-recognition domain. Galectin-1 is expressed in a variety of tissues including muscle epithelial cells the nervous system and immune cells. In particular high expression levels are found in the placenta and the thymus indicating a role in development and immune function. |
| **Biological function summary** | This protein mediates a variety of cellular processes such as cell differentiation apoptosis and immune cell modulation. As a monomer galectin-1 binds specifically to beta-galactoside residues on the cell surface. It plays a significant role in regulation of cell signaling circuits affecting T-cell activation as well as macrophage function. The Galectin-1 protein does not commonly form complexes but can influence interactions of other proteins by binding to glycoproteins on the cell surface which can modulate signaling outcomes. |
| **Pathways** | The protein is actively involved in pathways related to cell-cell interactions and immune modulation. It interacts with pathways like Ras signaling which is fundamental in cell growth proliferation and survival. Through these pathways galectin-1 is closely related to other proteins including Ras and Raf which are critical in transmitting signals from the cell surface to the DNA in the nucleus affecting gene expression involved in apoptosis and autophagy. |
| **Associated diseases and disorders** | Galectin-1 association with cancer progression and autoimmune diseases reflects its role in immune system regulation. High galectin-1 levels have been recorded in various tumors where the protein promotes tumor progression by supporting angiogenesis and suppressing immune response against cancer cells. In autoimmune disorders such as multiple sclerosis modulation of Galectin-1 levels can alter disease progression and the immune system's behavior. The protein interacts with other key regulators like cytokines emphasizing its importance in immune-inflammatory pathways and potential as a therapeutic target. |

## 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**

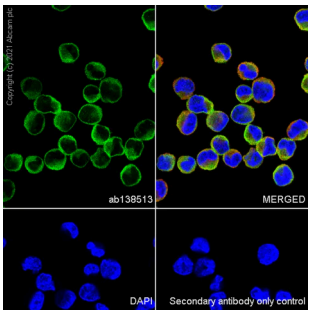
We do not recommend this combination. It is not covered by our product promise.

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.

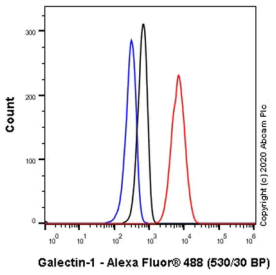
## 8 product images




### Immunocytochemistry/ Immunofluorescence - Anti-Galectin 1 antibody [EPR3206(2)] (ab138513)

Galectin 1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Galectin 1 antibody

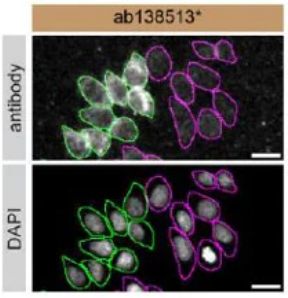
Immunocytochemistry analysis of K-562 (Human chronic myelogenous leukemia lymphoblast) cells labeling Galectin 1 with Purified ab138513 at 1/50 dilution (5.4 µg/mL). Cells were fixed in 100% Methanol and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/mL) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.




### Flow Cytometry (Intracellular) - Anti-Galectin 1 antibody [EPR3206(2)] (ab138513)

Galectin 1 Flow Cytometry (Intracellular) staining using rabbit Anti-Galectin 1 antibody

Flow Cytometry analysis of K-562 (Human chronic myelogenous leukemia lymphoblast) cells labelling Galectin 1 with Purified ab138513 at 1:30 dilution (10 µg/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor™ 488, ab150077) secondary antibody was used at 1:2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabelled control - Cell without incubation with primary antibody and secondary antibody (Blue).

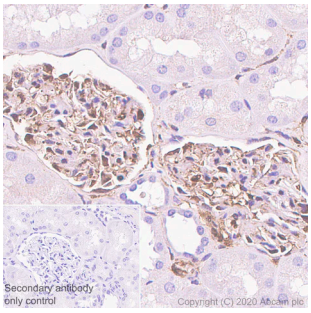



### Immunocytochemistry/ Immunofluorescence - Anti-Galectin 1 antibody [EPR3206(2)] (ab138513)

Galectin 1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Galectin 1 antibody

ab138513 was shown to react with LGALS1 in wild-type HAP1 cells in immunocytochemistry with loss of signal observed in a LGALS1 knockout cell line. Wild-type and knockout cells were mixed and pelleted at a 1:1 ratio on coverslips. The cells were fixed with 4% paraformaldehyde (15 min) then permeabilized with 0.1% Triton X-100 (10min) and then blocked with 1x PBS, 0.01% Triton X-100, 5% BSA, 5% NGS. The cells were then incubated with ab138513 at 1/250 dilution overnight at 4°C followed by a further incubation at room temperature for 1h with a goat anti-rabbit secondary antibody to (Alexa Fluor® 555) at 0.5 µg/ml. Acquisition of the green (wild-type), red (antibody staining) and far-red (knockout) channels was performed. Representative grayscale images of the red channel are shown. Wild-type and knockout cells are outlined with yellow and magenta dashed line, respectively. Schematic representation of the mosaic strategy used is shown on the bottom-right panel. Image was acquired with a Zeiss(LSM-880).

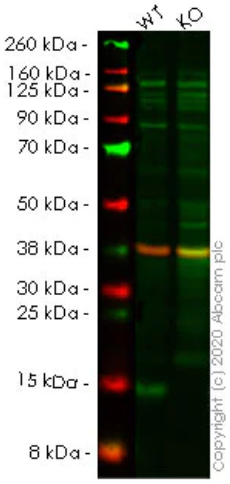
This data was provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.




## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Galectin 1 antibody [EPR3206(2)] (ab138513)

Galectin 1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Galectin 1 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human kidney tissue sections labeling Galectin 1 with Purified ab138513 at 1/16000 dilution (0.02 µg/mL). Heat mediated antigen retrieval was performed using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 1 (pH 6.0) . Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) secondary antibody was used at 1/0 dilution. PBS instead of the primary antibody was used as the negative control. M3




## Western blot - Anti-Galectin 1 antibody [EPR3206(2)] (ab138513)

Galectin 1 Western blot staining using rabbit Anti-Galectin 1 antibody

**Lanes 1- 2:** Merged signal (red and green). Green - ab138513 observed at 15 kDa. Red - Anti-GAPDH antibody [6C5] - Loading Control (ab8245) observed at 37 kDa.
ab138513 was shown to react with Galectin 1 in wild-type HEK-293T cells in western blot. Loss of signal was observed when knockout cell line ab266850 (knockout cell lysate ab256974) was used. Wild-type HEK-293T and LGALS1 knockout HEK-293T cell lysates were subjected to SDS-PAGE. ab138513 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) overnight at 4°C at a 1 in 1000 Dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye®800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye®680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-Galectin 1 antibody [EPR3206(2)] (ab138513) at 1/1000 dilution

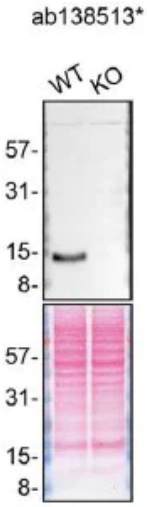
Lane 1:
Wild-type HEK-293T cell lysate at 20 µg

Lane 2:
Western blot - Human LGALS1 (Galectin 1) knockout HEK-293T cell lysate (ab256974) at 20 µg

Performed under reducing conditions.

Predicted band size: 15 kDa

Observed band size: 15 kDa




## Western blot - Anti-Galectin 1 antibody [EPR3206(2)] (ab138513)

Galectin 1 Western blot staining using rabbit Anti-Galectin 1 antibody

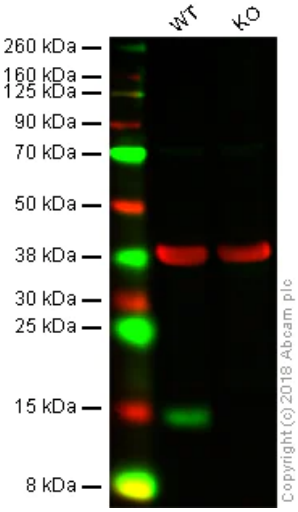
ab138513 was shown to react with LGALS1 in wild-type HAP1 cells in Western blot with loss of signal observed in a LGALS1 knockout cell line. Wild-type HAP1 and LGALS1 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 5% milk in TBST for 1 hr before incubation with ab138513 overnight at 4 °C at a 1/10000 dilution. Blots were incubated with secondary antibodies at 0.2 µg/mL before imaging.

This data was provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.
All lanes:
Western blot - Anti-Galectin 1 antibody [EPR3206(2)] (ab138513) at 1/10000 dilution

Lane 1:
Wild-type HAP1 lysate at 10 µg

Lane 2:
LGALS1 knock-out HAP1 lysate at 10 µg

Observed band size: 14 kDa




## Western blot - Anti-Galectin 1 antibody [EPR3206(2)] (ab138513)

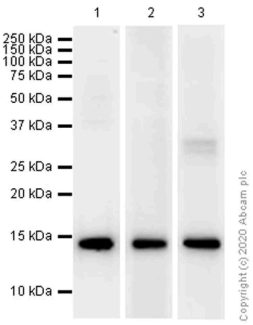
**Lanes 1 - 2:** Merged signal (red and green). Green - ab138513 observed at 15 kDa. Red - loading control, ab9484, observed at 37 kDa.

ab138513 was shown to specifically react with Galectin 1 in wild-type HAP1 cells as signal was lost in LGALS1 (Galectin 1) knockout cells. Wild-type and LGALS1 (Galectin 1) knockout samples were subjected to SDS-PAGE. ab138513 and ab9484 (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 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 1/20000 dilution for 1 hour at room temperature before imaging.
All lanes:
Western blot - Anti-Galectin 1 antibody [EPR3206(2)] (ab138513) at 1/1000 dilution

Lane 1:
Wild-type HAP1 whole cell lysate at 20 µg

Lane 2:
LGALS1 (Galectin 1) knockout HAP1 whole cell lysate at 20 µg

Predicted band size: 15 kDa




# Western blot - Anti-Galectin 1 antibody [EPR3206(2)] (ab138513)

All lanes:
Western blot - Anti-Galectin 1 antibody [EPR3206(2)] (ab138513) at 1/10000 dilution

Lane 1:
K-562 (Human chronic myelogenous leukemia lymphoblast) whole cell lysate at 15 µg

Lane 2:
Mouse heart lysate at 15 µg

Lane 3:
Rat heart lysate at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 15 kDa

Observed band size: 14 kDa

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