abcam

ab240972

Anti-Galectin 1 antibody [SP247] - 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	SP247
Purification technique	Affinity purification Protein A/G
Concentration	1.015 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS by protein A/G.

Reactivity data

WB

Tested

Species	Mouse

Dilution info	-
Notes	Primary antibody incubation for 1 hour at room temperature.

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Rat, Cow, Pig
Dilution info	-
Notes	-

IHC-Fr

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat, Cow, Pig
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	Perform heat mediated antigen retrieval by boiling tissue section in EDTA buffer pH 8.0 for 10 minutes followed by cooling at room temperature for 20 minutes. Primary antibody incubation for 10 minutes at room temperature.

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat, Cow, Pig
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	Primary antibody incubation for 30 minutes at 4Â°C.

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat, Cow, Pig
Dilution info	-

Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat, Cow, Pig
Dilution info	-
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	Blue Ice
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab240972 is the carrier-free version of ab192842.

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-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

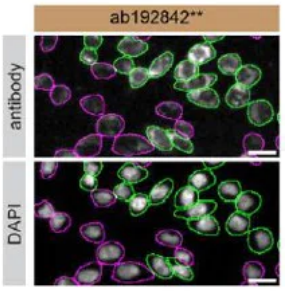
We do not recommend this combination. It is not covered by our product promise.

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.

4 product images

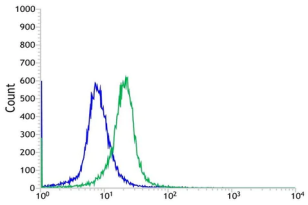


Immunocytochemistry/ Immunofluorescence - Anti-Galectin 1 antibody [SP247] - BSA and Azide free (ab240972)

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

This image was produced using ab192842, the same clone but in a different buffer formulation. ab192842 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 ab192842 at 1/100 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).

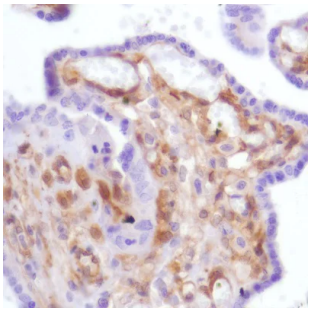
This data was provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate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



Flow Cytometry (Intracellular) - Anti-Galectin 1 antibody [SP247] - BSA and Azide free (ab240972)

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

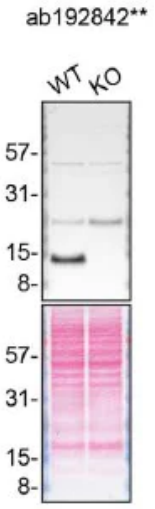
Intracellular flow cytometric analysis ofHL-60 (Human promyelocytic leukemia cell line) cells labeling Galectin 1 with ab192842 at 1/100 dilution (green) compared to a negative control of rabbit IgG (blue).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA and sodium azide (ab192842).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Galectin 1 antibody [SP247] - BSA and Azide free (ab240972)

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

Formalin-fixed, paraffin-embedded human placenta tissue stained for Galectin 1 using ab192842 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA and sodium azide (ab192842).



Western blot - Anti-Galectin 1 antibody [SP247] - BSA and Azide free (ab240972)

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

This data was developed using ab192842, the same antibody clone in a different buffer formulation.
ab192842 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 ab192842 overnight at 4 °C at a 1/100 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 [SP247] - C-terminal (ab192842) at 1/100 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

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