abcam

ab192842

Anti-Galectin 1 antibody [SP247] - C-terminal

Recombinant | RabMAb | KO Validated | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.1% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	SP247
Purification technique	Affinity purification Protein A
Concentration	0.042 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	1/100
Notes	Primary antibody incubation for 1 hour at room temperature.

Species	Human
Dilution info	1/100
Notes	-

Predicted

Species	Rat, Cow, Pig
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/100
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	-

IHC-Fr

Tested

Species	Human

Dilution info	10 µg/mL
Notes	-

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	1/100
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	1/100
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	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

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.

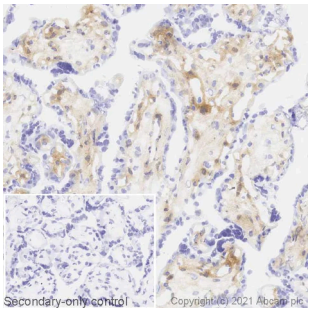
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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

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7 product images



Immunohistochemistry (Frozen sections) - Anti-Galectin 1 antibody [SP247] - C-terminal (ab192842)

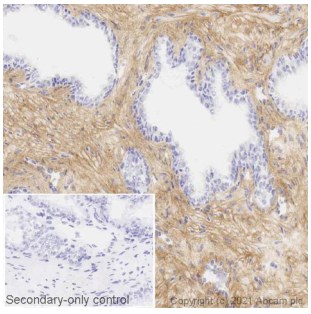
Galectin 1 Immunohistochemistry (Frozen sections) staining using rabbit Anti-Galectin 1 antibody

IHC image of Galectin 1 staining in a section of frozen normal human placenta* performed on a Leica BOND™ system using the standard protocol. The section was fixed in 10% paraformaldehyde (10 min) prior to staining. The section was incubated with ab192842, 10ugml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre

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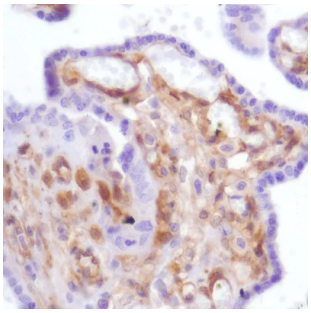
Immunohistochemistry (Frozen sections) - Anti-Galectin 1 antibody [SP247] - C-terminal (ab192842)

Galectin 1 Immunohistochemistry (Frozen sections) staining using rabbit Anti-Galectin 1 antibody

IHC image of Galectin 1 staining in a section of frozen normal human prostate carcinoma* performed on a Leica BOND™ system using the standard protocol. The section was fixed in 10% paraformaldehyde (10 min) prior to staining. The section was incubated with ab192842, 10ugml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

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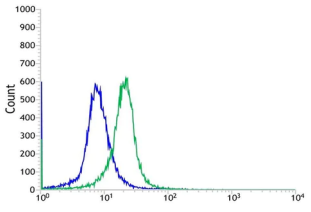
*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Galectin 1 antibody [SP247] - C-terminal (ab192842)

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

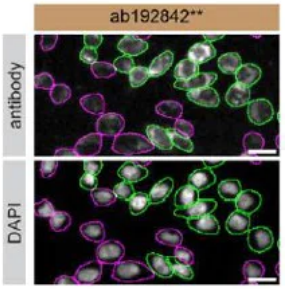
Formalin-fixed, paraffin-embedded human placenta tissue stained for Galectin 1 using ab192842 at 1/100 dilution in immunohistochemical analysis.



Flow Cytometry (Intracellular) - Anti-Galectin 1 antibody [SP247] - C-terminal (ab192842)

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).

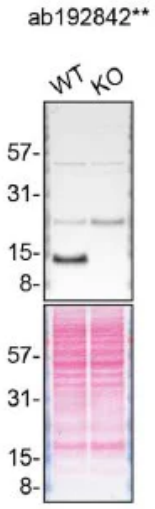


Immunocytochemistry/ Immunofluorescence - Anti-Galectin 1 antibody [SP247] - C-terminal (ab192842)

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

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.



Western blot - Anti-Galectin 1 antibody [SP247] - C-terminal (ab192842)

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

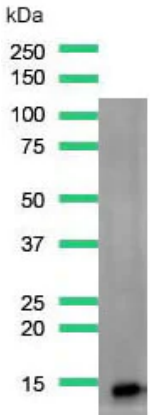
ab192842 was shown to react with LGALS1 in wild-type HAP1 cells in Western blot with loss of signal observed in a LGALS1 knockout cell line. Wild-type HAP1 and LGALS1 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 5% milk in TBST for 1 hr before incubation with ab192842 overnight 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



Western blot - Anti-Galectin 1 antibody [SP247] - C-terminal (ab192842)

All lanes:
Western blot - Anti-Galectin 1 antibody [SP247] - C-terminal (ab192842) at 1/100 dilution

All lanes:
NIH/3T3 (Mouse embryo fibroblast cell line) cell lysate

Predicted band size: 15 kDa

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