**Product name**  Anti-Galectin 3 antibody [A3A12] ab2785

**Overview**

**Product name**  Anti-Galectin 3 antibody [A3A12]
**Description**  Mouse monoclonal [A3A12] to Galectin 3
**Host species**  Mouse
**Specificity**  By Western blot, this antibody detects an ~30 kDa protein representing Galectin 3 from Jurkat cells transfected with human Galectin 3. Immunohistochemical staining of Galectin 3 in rat olfactory bulb yields a pattern consistent with nuclear and plasma membrane staining.

**Tested applications**  
Suitable for: WB, ICC/IF, IHC-P

**Species reactivity**  
Reacts with: Mouse, Human

**Immunogen**  
Recombinant full length protein corresponding to Human Galectin 3.

**Epitope**  
The epitope for this antibody has been mapped to the first 58 amino acids of Galectin 3.

**Positive control**  
WB: HeLa, MCF7 whole cell lysates. IHC-P: Human ovarian, colon and mouse colon tissue. ICC: HeLa, MCF7 and NIH-3T3 cells.

**General notes**

This antibody has been shown to potentiate the binding of Galectin 3 to IgG.

The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

**Properties**

**Form**  Liquid

**Storage instructions**  Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

**Storage buffer**  Preservative: 0.05% Sodium azide
Constituent: 99% PBS

**Purity**  Affinity purified
Primary antibody notes
This antibody has been shown to potentiate the binding of Galectin 3 to IgG.

Clonality
Monoclonal

Clone number
A3A12

Isotype
IgG1

Applications

The Abpromise guarantee
Our Abpromise guarantee covers the use of ab2785 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>★★★★★☆☆☆ (3)</td>
<td>Use a concentration of 1 µg/ml. Detects a band of approximately 30 kDa (predicted molecular weight: 26 kDa).</td>
</tr>
<tr>
<td>ICC/IF</td>
<td>★★★★★☆☆☆ (5)</td>
<td>1/100 - 1/200.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>★★★★★☆☆☆ (3)</td>
<td>1/20 - 1/200.</td>
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</tbody>
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Target

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.

Tissue specificity
A major expression is found in the colonic epithelium. It is also abundant in the activated macrophages.

Sequence similarities
Contains 1 galectin domain.

Cellular localization
Nucleus. Cytoplasmic in adenomas and carcinomas. May be secreted by a non-classical secretory pathway and associate with the cell surface.

Images
Western blot - Anti-Galectin 3 antibody [A3A12] (ab2785)

All lanes: Anti-Galectin 3 antibody [A3A12] (ab2785) at 1/1000 dilution

Lane 1: HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate
Lane 2: MDA-MB-231 (human breast adenocarcinoma cell line) whole cell lysate
Lane 3: A549 (human lung carcinoma cell line) whole cell lysate
Lane 4: PC-3 (human prostate adenocarcinoma cell line) whole cell lysate
Lane 5: U-87 MG (human glioblastoma-astrocytoma epithelial cell line) whole cell lysate
Lane 6: A431 (human epidermoid carcinoma cell line) whole cell lysate

Lysates/proteins at 30 µg per lane.

Secondary

All lanes: Goat anti-Mouse IgG (H+L) (HRP) at 1/4000 dilution

Developed using the ECL technique.

Predicted band size: 26 kDa
Observed band size: 30 kDa
Additional bands at: 70 kDa. We are unsure as to the identity of these extra bands.

Whole cell extracts were electrophoresed using a 4-12% Bis-Tris Protein Gel. Resolved proteins were then transferred onto a Nitrocellulose membrane using a dry blotting system.
Immunohistochemical analysis of human ovarian carcinoma tissue (right) labeling Galectin 3 in the nucleus and cytoplasm with ab2785, compared with a negative control (left) by Immunohistochemistry (formalin/PFA-fixed paraffin-embedded sections). To expose target proteins, antigen retrieval method was performed using 10mM sodium citrate (pH 6.0) microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H2O2-methanol for 15 min at room temperature. Tissue sections were incubated with the primary antibody (1:100 in 3% BSA-PBS) overnight at 4°C. A HRP-conjugated anti-mouse IgG was used as the secondary antibody, followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.

Immunofluorescent analysis of HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling Galectin 3 (green) in the cytoplasm and nucleus with ab2785. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with a Galectin 3 monoclonal antibody (Product # MA1-940) in 3% BSA-PBS at a dilution of 1:100 and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight-conjugated secondary antibody in PBS at room temperature in the dark. F-actin (red) was stained with a fluorescent red phalloidin and nuclei (blue) were stained with Hoechst or DAPI. Images were taken at a magnification of 60x.

All lanes: Anti-Galectin 3 antibody [A3A12] (ab2785) at 1/1000 dilution

Lane 1: MCF7 (Human breast adenocarcinoma cell line) whole cell lysate

Lane 2: HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lane 3: NIH/3T3 (Mouse embryo fibroblast cell line) whole cell lysate

Lysates/proteins at 25 µg/ml per lane.

Predicted band size: 26 kDa

Observed band size: 30 kDa
Western blot - Anti-Galectin 3 antibody [A3A12] (ab2785)

All lanes: Anti-Galectin 3 antibody [A3A12] (ab2785) at 1/1000 dilution

Lane 1: Wild-Type HeLa (human epithelial cell line from cervix adenocarcinoma) membrane extract
Lane 2: HeLa CAS9 membrane extract
Lane 3: HeLa LGALS3 knockout membrane extract

Lysates/proteins at 30 µg per lane.

Secondary

All lanes: Goat anti-Mouse IgG (H+L) (HRP) at 1/4000 dilution

Developed using the ECL technique.

Predicted band size: 26 kDa

Knockout of LGALS3 was achieved by CRISPR-Cas9 genome editing using Lentiviral sgRNA and Cas9 Lentivirus. The samples were electrophoresed using 4-12% Bis-Tris Protein Gel. Resolved proteins were then transferred onto a nitrocellulose membrane using a dry blotting system.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Galectin 3 antibody [A3A12] (ab2785)

Immunohistochemical analysis (formalin/PFA-fixed paraffin-embedded sections) human colon tissue (right) labelling Galectin 3 in the nucleus and cytoplasm with ab2785, compared with a negative control (left). To expose target proteins, antigen retrieval method was performed using 10mM sodium citrate (pH 6.0) microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H2O2-methanol for 15 min at room temperature. Tissue sections were incubated with the primary antibody (1:100 in 3% BSA-PBS) overnight at 4°C. A HRP-conjugated anti-mouse IgG was used as the secondary antibody, followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.
Immunofluorescent analysis of NIH/3T3 (Mouse embryo fibroblast cell line) cells labelling Galectin 3 (green) in the cytoplasm and nucleus with ab2785. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were incubated with the primary antibody (1:100 in 3% BSA-PBS) overnight at 4°C. A DyLight-conjugated anti-mouse was used as the secondary antibody. Red (phalloidin) - F-actin, Blue - nuclei. Images were taken at a magnification of 60x.

Immunohistochemical analysis of (formalin/PFA-fixed paraffin-embedded sections) mouse colon tissue (right) labelling Galectin 3 in the nucleus and cytoplasm with ab2785, compared with a negative control (left) by . To expose target proteins, antigen retrieval method was performed using 10mM sodium citrate (pH 6.0) microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H2O2-methanol for 15 min at room temperature. Tissue sections were incubated with the primary antibody (1:20 in 3% BSA-PBS) overnight at 4°C. A HRP-conjugated anti-mouse IgG was used as the secondary antibody, followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.

Immunofluorescent analysis of MCF7 (Human breast adenocarcinoma cell line) cells labelling Galectin 3 (green) in the cytoplasm and nucleus with ab2785. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were incubated with the primary antibody (1:100 in 3% BSA-PBS) overnight at 4 °C. A DyLight-conjugated anti-mouse was used as the secondary antibody. Red (phalloidin) - F-actin, Blue - nuclei. Images were taken at a magnification of 60x.
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