

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Galectin-1 in direct ELISAs and Western blots. In direct ELISAs, approximately 40% cross-reactivity with recombinant mouse (rm) Galectin-1 is observed and less than 5% cross-reactivity with recombinant human (rh) Galectin-2, rhGalectin-3, rhGalectin-4, rhGalectin-7, rhGalectin-8, and rmGalectin-9 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human Galectin-1 (R&D Systems, Catalog # 1152-GA) Ala2-Asp135 Accession # P09382
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

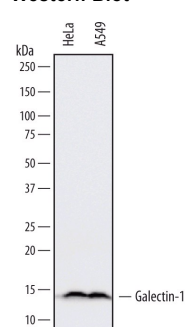
## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 µg/mL	See Below
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below
<b>Intracellular Staining by Flow Cytometry</b>	2.5 µg/10 <sup>6</sup> cells	See Below

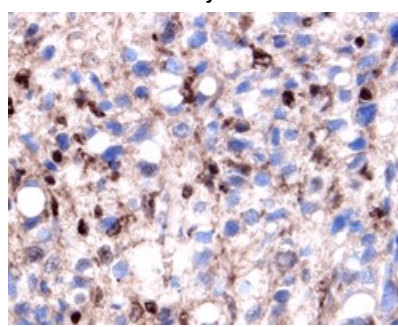
## DATA

### Western Blot



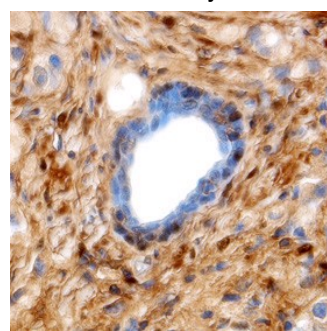
**Detection of Human Galectin-1 by Western Blot.** Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line and A549 human lung carcinoma cell line. PVDF membrane was probed with 0.1 µg/mL of Goat Anti-Human Galectin-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1152) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for Galectin-1 at approximately 14 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 1](#).

### Immunohistochemistry



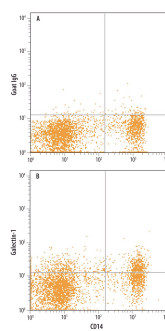
**Galectin-1 in Human Prostate Cancer Tissue.** Galectin-1 was detected in immersion fixed paraffin-embedded sections of human prostate cancer tissue using 1.7 µg/mL Goat Anti-Human Galectin-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1152) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

### Immunohistochemistry



**Galectin-1 in Human Prostate Cancer Tissue.** Galectin-1 was detected in immersion fixed paraffin-embedded sections of human prostate cancer tissue using Goat Anti-Human Galectin-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1152) at 5 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific labeling was localized to the cytoplasm of stromal cells and nuclei of epithelial cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

### Intracellular Staining by Flow Cytometry



**Detection of Galectin-1 in Human Blood Monocytes by Flow Cytometry.** Human peripheral blood monocytes were stained with Mouse Anti-Human CD14 PE-conjugated Monoclonal Antibody (Catalog # FAB3832P) and either (A) Normal Goat IgG Control (Catalog # AB-108-C) or (B) Goat Anti-Human Galectin-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1152) followed by Allophycocyanin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0108). To facilitate intracellular staining, cells were fixed with paraformaldehyde and permeabilized with saponin.

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

The galectins constitute a large family of carbohydrate-binding proteins with specificity for N-acetyl-lactosamine-containing glycoproteins. At least 14 mammalian galectins, which share structural similarities in their carbohydrate recognition domains (CRD), have been identified to date. The galectins have been classified into the prototype galectins (-1, -2, -5, -7, -10, -11, -13, -14), which contain one CRD and exist either as a monomer or a noncovalent homodimer; the chimera galectins (galectin-3) containing one CRD linked to a nonlectin domain; and the tandem-repeat galectins (-4, -6, -8, -9, -12) consisting of two CRDs joined by a linker peptide. Galectins lack a classical signal peptide and can be localized to the cytosolic compartments where they have intracellular functions. However, via one or more as yet unidentified non-classical secretory pathways, galectins can also be secreted to function extracellularly. Individual members of the galectin family have different tissue distribution profiles and exhibit subtle differences in their carbohydrate-binding specificities. Each family member may preferentially bind to a unique subset of cell-surface glycoproteins.

Galectin-1, also known as L-14, BHL and galaptin, is a monomeric or homodimeric prototype galectin that is expressed in a variety of cells and tissues including muscle, heart, liver, prostate, lymph nodes, spleen, thymus, placenta, testis, retina, macrophages, B cells, T cells, dendritic cells, and tumor cells. It preferentially binds laminin, fibronectin, 90K/Mac-2BP, CD45, CD43, CD7, CD2, CD3, and ganglioside GM1. Galectin-1 modulates cell growth and proliferation, either positively or negatively, depending on the cell type and activation status. It controls cell survival by inducing apoptosis of activated T cells and immature thymocytes. It modulates cytokine secretion by inducing Th2 type cytokines and inhibiting pro-inflammatory cytokine production. Galectin-1 can also modulate cell-cell as well as cell-matrix interactions and depending on the cell type and developmental stage, promote cell attachment or detachment. Galectin-1 has immunosuppressive and anti-inflammatory properties and has been shown to suppress acute and chronic inflammation and autoimmunity. Human and mouse galectin-1 share about 88% amino acid sequence similarity.