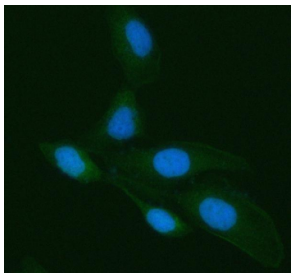
LGALS3 Antibody / Galectin 3 / GAL3 (FY12469)

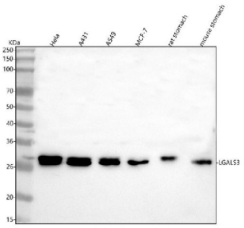
Catalog No.	Formulation	Size
FY12469	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P17931
Applications	Western Blot : 0.25-0.5ug/ml Immunocytochemistry : 5ug/ml Immunofluorescence : 5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This LGALS3 antibody is available for research use only.



Immunofluorescent staining of Galectin-3/LGALS3 using anti-LGALS3 antibody (green). Galectin-3/LGALS3 was detected in an immunocytochemical section of HELA cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-LGALS3 antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of Galectin-3/LGALS3 using anti-LGALS3 antibody. Lane 1: human Hela whole cell lysates, Lane 2: human whole cell lysates, Lane 3: human whole cell lysates, Lane 4: human MCF-7 whole cell lysates, Lane 5: rat stomach tissue lysates, Lane 6: mouse stomach tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-LGALS3 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. The expected molecular weight of Galectin-3/LGALS3 is at 26 kDa.

Description

LGALS3 antibody detects Galectin-3, a beta-galactoside-binding lectin involved in cell adhesion, immune modulation, apoptosis regulation, fibrosis, and tumor progression. Galectin-3 functions as both an intracellular regulator and an extracellular signaling molecule, mediating diverse processes such as inflammation, angiogenesis, and cell-matrix interaction. The LGALS3 antibody is extensively used in studies of cancer, cardiovascular disease, and immune disorders where Galectin-3 serves as a biomarker and functional effector in pathological remodeling.

Galectin-3 is encoded by the LGALS3 gene located on human chromosome 14q22.3. The protein contains a carbohydrate recognition domain that binds beta-galactoside residues on glycoproteins and an N-terminal domain enabling oligomerization. This structure allows Galectin-3 to form lattices at the cell surface, influencing receptor clustering and signaling. It is expressed in epithelial cells, macrophages, fibroblasts, and endothelial cells, and can be secreted via a non-classical pathway into the extracellular space. Once outside the cell, it modulates adhesion and migration, contributing to wound healing and fibrosis.

The LGALS3 antibody is particularly useful for detecting Galectin-3 expression in tumor and fibrotic tissues. Western blot typically shows an ~26 kilodalton band, while immunostaining reveals cytoplasmic, nuclear, or membrane-associated localization depending on cellular context. Overexpression of Galectin-3 is associated with aggressive tumor phenotypes, including resistance to apoptosis and enhanced metastasis. Mechanistically, Galectin-3 interacts with cell-surface receptors such as integrins and growth factor receptors, amplifying signaling through the phosphoinositide 3-kinase/AKT and transforming growth factor beta (TGF-beta) pathways. This dual role in intracellular survival signaling and extracellular communication underscores its complexity as a therapeutic target.

Beyond oncology, Galectin-3 contributes to fibrotic progression in the heart, kidneys, and liver. It promotes fibroblast activation, collagen deposition, and tissue stiffening, leading to organ dysfunction. Elevated plasma Galectin-3 levels are now used clinically as a prognostic biomarker for heart failure. In immune regulation, Galectin-3 modulates macrophage polarization, promotes neutrophil adhesion, and suppresses T-cell receptor signaling, linking innate and adaptive immune responses. NSJ Bioreagents offers a validated LGALS3 antibody optimized for western blot, ELISA, flow cytometry, and immunohistochemistry, providing reliable detection of Galectin-3 for applications across cancer, inflammation, and fibrotic disease research.

Application Notes

Optimal dilution of the LGALS3 antibody should be determined by the researcher.

Immunogen

E.coli-derived human Galectin-3/LGALS3 recombinant protein (Position: R129-I250) was used as the immunogen for the LGALS3 antibody.

Storage

After reconstitution, the LGALS3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.