# SIGLEC15 Antibody / Sialic acid-binding Ig-like lectin 15 (FY12474)

| Catalog No. | Formulation | Size |
|---|---|---|
| FY12474 | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml | 100 ug |

**Bulk quote request**

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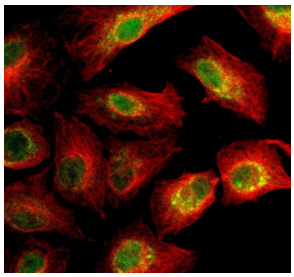
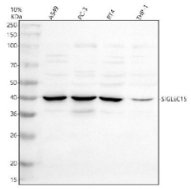
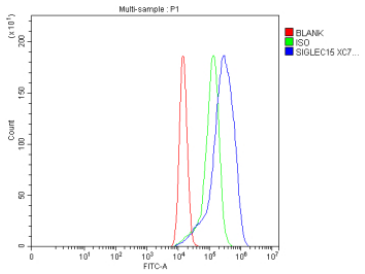
|---|---|
| **Availability** | 1-2 days |
| **Species Reactivity** | Human |
| **Format** | Lyophilized |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Immunogen affinity purified |
| **Buffer** | Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4. |
| **UniProt** | Q6ZMC9 |
| **Applications** | Western Blot : 0.25-0.5ug/ml<br>Immunocytochemistry/Immunofluorescence : 5ug/ml<br>Flow Cytometry : 1-3ug/million cells<br>ELISA : 0.1-0.5ug/ml |
| **Limitations** | This SIGLEC15 antibody is available for research use only. |



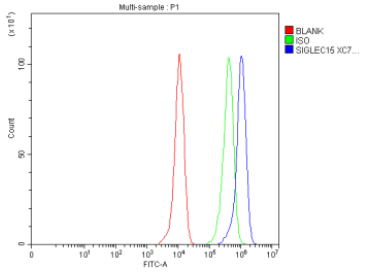
Immunofluorescent staining of SIGLEC15 using anti-SIGLEC15 antibody (green) and anti-Beta Tubulin antibody (red). SIGLEC15 was detected in an immunocytochemical section of cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-SIGLEC15 antibody and mouse anti-Beta Tubulin antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG and Cy3 Conjugated Goat Anti-Mouse IgG were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of SIGLEC15 using anti-SIGLEC15 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human whole cell lysates, Lane 2: human PC-3 whole cell lysates, Lane 3: human RT4 whole cell lysates, Lane 4: human THP-1 whole cell 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-SIGLEC15 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 an ECL Plus Western Blotting Substrate. SIGLEC15 (~36 kDa predicted) was detected predominantly at ~40 kDa, consistent with N-linked glycosylation of its extracellular domain. A faint lower band near ~36 kDa likely represents the partially processed form.




Flow Cytometry analysis of cells using anti-SIGLEC15 antibody. Overlay histogram showing cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-SIGLEC15 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.




Flow Cytometry analysis of THP-1 cells using anti-SIGLEC15 antibody. Overlay histogram showing THP-1 cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-SIGLEC15 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

## Description

SIGLEC15 antibody recognizes Sialic acid-binding Ig-like lectin 15, a type I transmembrane protein belonging to the Siglec (sialic acid-binding immunoglobulin-like lectins) family of immune modulators. SIGLEC15 plays an important role in immune regulation, osteoclast differentiation, and tumor immune evasion. It binds sialylated glycoconjugates on target cells, transmitting inhibitory or activating signals that shape immune responses. The SIGLEC15 antibody is widely used in immunology, oncology, and bone biology research to study checkpoint signaling and macrophage-mediated immune regulation.

Sialic acid-binding Ig-like lectin 15 is encoded by the SIGLEC15 gene located on human chromosome 18q12.3. The protein consists of an extracellular N-terminal V-set immunoglobulin domain that recognizes sialylated glycans, a transmembrane segment, and a short cytoplasmic tail that associates with adaptor proteins such as DAP12 or DAP10 to mediate downstream signaling. In osteoclasts, SIGLEC15 promotes differentiation and bone resorption by activating phosphoinositide 3-kinase and mitogen-activated protein kinase cascades. In immune cells, it functions as a checkpoint ligand that suppresses T-cell activation, analogous to PD-L1.

Studies using the SIGLEC15 antibody have shown that this protein is upregulated on tumor-associated macrophages and osteoclasts in various malignancies and inflammatory diseases. Western blot analyses typically detect a 35-40 kilodalton glycoprotein band. Immunohistochemistry demonstrates strong membrane staining in macrophage-rich regions of tumors and in bone-resorptive zones. Functionally, SIGLEC15 acts as an immune suppressor by binding unidentified receptors on T cells and natural killer cells, inhibiting cytokine production and cytotoxic responses. Its expression inversely

correlates with PD-L1, suggesting a complementary role in immune evasion mechanisms exploited by tumors.

Therapeutic targeting of SIGLEC15 has emerged as a promising strategy in cancer immunotherapy, particularly for patients unresponsive to PD-1/PD-L1 blockade. The protein also regulates osteoclast activity and bone remodeling, making it relevant in osteoporosis and arthritis research. NSJ Bioreagents provides a validated SIGLEC15 antibody optimized for western blot, flow cytometry, and immunohistochemistry. This reagent enables researchers to investigate innate immune regulation, tumor microenvironment biology, and checkpoint-based immunotherapy development.

## Application Notes

Optimal dilution of the SIGLEC15 antibody should be determined by the researcher.

## Immunogen

E.coli-derived human SIGLEC15 recombinant protein (Position: R22-R319) was used as the immunogen for the SIGLEC15 antibody.

## Storage

After reconstitution, the SIGLEC15 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.