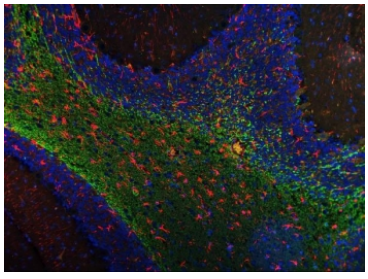
# SIGLEC-4a Antibody / Sialic Acid Binding Immunoglobulin Like Lectin 4A Antibody [clone 2G11] (RQ6281)

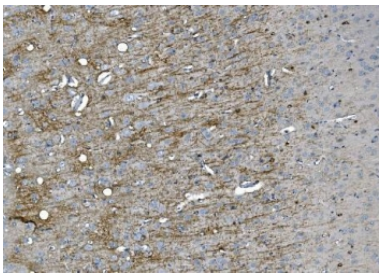
| Catalog No. | Formulation | Size |
|---|---|---|
| RQ6281 | 0.5mg/ml if reconstituted with 0.2ml sterile DI water | 100 ug |

**Bulk quote request**

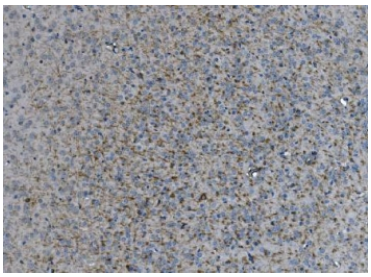
| | |
|---|---|
| **Availability** | 1-3 business days |
| **Species Reactivity** | Human, Mouse, Rat |
| **Format** | Antigen affinity purified |
| **Host** | Mouse |
| **Clonality** | Monoclonal (mouse origin) |
| **Isotype** | Mouse IgG2a |
| **Clone Name** | 2G11 |
| **Purity** | Affinity purified |
| **Buffer** | Lyophilized from 1X PBS with 2% Trehalose |
| **UniProt** | P20916 |
| **Applications** | Western blot: 1-2ug/ml<br>Immunohistochemistry (FFPE): 2-5ug/ml<br>Flow cytometry: 1-3ug/million cells<br>Immunofluorescence: 5ug/ml |
| **Limitations** | This SIGLEC-4a Antibody / Sialic Acid Binding Immunoglobulin Like Lectin 4A Antibody is available for research use only. |



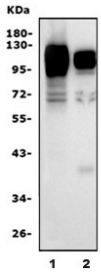
SIGLEC-4a Antibody Rat Cerebellum IF. Immunofluorescent staining of FFPE rat cerebellum tissue using SIGLEC-4a antibody (green) with GFAP antibody (red) and DAPI nuclear counterstain (blue). Heat-induced epitope retrieval was performed in pH6 citrate buffer, followed by incubation with the primary antibodies and fluorescent secondary antibodies. SIGLEC-4a immunoreactivity is prominently localized within the cerebellar white matter, consistent with expression in myelinating glial cells, while GFAP labels astrocytes. This result demonstrates that SIGLEC-4a antibody, also known as a Sialic Acid Binding Immunoglobulin Like Lectin 4A antibody, is suitable for immunofluorescence analysis of rat nervous tissue.



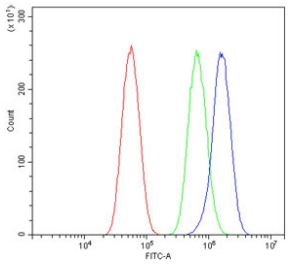
SIGLEC-4a Antibody Rat Brain IHC. IHC staining of FFPE rat brain tissue using SIGLEC-4a antibody. Heat-induced epitope retrieval was performed in pH8 EDTA buffer before incubation with the primary antibody, followed by HRP secondary antibody and DAB chromogen. Strong immunoreactivity is observed within myelinated white matter tracts, while adjacent gray matter exhibits comparatively weaker staining, consistent with the distribution of myelin-associated glycoprotein in the central nervous system. This result demonstrates that SIGLEC-4a antibody, also known as a Sialic Acid Binding Immunoglobulin Like Lectin 4A antibody, is suitable for immunohistochemical detection of myelin-associated structures in rat brain tissue.



SIGLEC-4a Antibody Mouse Brain IHC. IHC staining of FFPE mouse brain tissue using SIGLEC-4a antibody. Heat-induced epitope retrieval was performed in pH8 EDTA buffer before incubation with the primary antibody, followed by HRP secondary antibody and DAB chromogen. Diffuse membranous and cytoplasmic immunoreactivity is observed throughout myelin-rich regions of the brain, consistent with the expression pattern of myelin associated glycoprotein in oligodendrocytes and myelinated fibers. This result demonstrates that SIGLEC-4a antibody, also known as a Sialic Acid Binding Immunoglobulin Like Lectin 4A antibody, is suitable for immunohistochemical detection of myelin-associated proteins in mouse brain tissue.




SIGLEC-4a Antibody Rat and Mouse Brain WB. Western blot analysis of rat and mouse brain lysates using SIGLEC-4a antibody. Lane 1: rat brain. Lane 2: mouse brain. A broad, intense band cluster is detected between approximately 90-130 kDa in both species, consistent with the highly glycosylated forms of myelin associated glycoprotein (MAG) found in central nervous system tissue. Additional bands at and just below approximately 72 kDa likely represent lower-molecular-weight MAG isoforms and/or less-glycosylated variants. The observed migration above the predicted molecular weight of approximately 69 kDa is expected due to extensive glycosylation and glycoform heterogeneity. These results demonstrate that SIGLEC-4a antibody, also known as a Sialic Acid Binding Immunoglobulin Like Lectin 4A antibody, reliably detects endogenous MAG in rodent brain by Western blot.




SIGLEC-4a Antibody Human Glioblastoma Cell FACS. Flow cytometry analysis of fixed and permeabilized human U-87 MG glioblastoma cells using SIGLEC-4a antibody at 1 ug/10^6 cells following blocking with goat serum. Red: cells alone. Green: isotype control. Blue: SIGLEC-4a antibody. A clear rightward shift of the antibody-stained population relative to the isotype control demonstrates specific detection of endogenous SIGLEC-4a expression in U-87 MG cells. This result shows that SIGLEC-4a antibody, also known as a Sialic Acid Binding Immunoglobulin Like Lectin 4A antibody, is suitable for flow cytometric analysis of human glioblastoma cells.

## Description

SIGLEC-4a Antibody / Sialic Acid Binding Immunoglobulin Like Lectin 4A Antibody recognizes Sialic Acid Binding Immunoglobulin Like Lectin 4A (SIGLEC-4a), more commonly known as myelin associated glycoprotein (MAG). Unlike most members of the Siglec family, which are expressed primarily by immune cells, SIGLEC-4a is selectively expressed by myelinating oligodendrocytes in the central nervous system and Schwann cells in the peripheral nervous system. The protein is concentrated within the periaxonal membrane of the myelin sheath, where it mediates critical communication between glial cells and axons. NSJ Bioreagents supplies SIGLEC-4a Antibody 2G11 for reliable detection of this specialized neuronal Siglec in a broad range of research applications.

Sialic Acid Binding Immunoglobulin Like Lectin 4A functions by recognizing sialylated glycoconjugates present on neuronal membranes, thereby stabilizing the intimate association between axons and their surrounding myelin. Through these interactions, SIGLEC-4a promotes long-term axonal maintenance, preserves myelin integrity, and supports efficient

nerve impulse conduction. The protein also participates in intracellular signaling pathways that inhibit axonal regeneration following injury, making it an important regulator of nervous system repair. Consequently, SIGLEC-4a Antibody / Sialic Acid Binding Immunoglobulin Like Lectin 4A Antibody is widely used to investigate neuron-glia communication, myelin biology, axonal stability, and regenerative neuroscience.

Altered expression or function of SIGLEC-4a has been implicated in multiple sclerosis, peripheral neuropathies, leukodystrophies, traumatic nerve injury, and other disorders characterized by demyelination or axonal degeneration. Autoantibodies directed against MAG are likewise associated with immune-mediated demyelinating neuropathies that impair sensory and motor function. Because Sialic Acid Binding Immunoglobulin Like Lectin 4A is essential for maintaining healthy myelinated axons, it serves as an important biomarker for studies of myelin maintenance, remyelination, and neurodegenerative disease.

SIGLEC-4a Antibody (clone 2G11) is a valuable reagent for investigating myelin biology, sialic acid-mediated cell recognition, axon-glia communication, and nervous system development. By enabling reliable detection of Sialic Acid Binding Immunoglobulin Like Lectin 4A, a SIGLEC-4a Antibody / Sialic Acid Binding Immunoglobulin Like Lectin 4A Antibody supports research into demyelinating disease, peripheral neuropathy, neurodegeneration, and the molecular mechanisms that preserve myelin integrity.

For a broader overview of this myelin-associated protein and additional validated reagents, visit our MAG Antibody / Myelin Associated Glycoprotein Antibody page.

## Application Notes

Optimal dilution of the SIGLEC-4a Antibody / Sialic Acid Binding Immunoglobulin Like Lectin 4A Antibody should be determined by the researcher.

## Immunogen

A human recombinant partial protein (amino acids E34-R605) was used as the immunogen for the Siglec-4a antibody.

## Storage

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

## Alternate Names

MAG antibody, Myelin Associated Glycoprotein antibody, SIGLEC4A antibody, Myelin Glycoprotein antibody, HNK-1 Binding Glycoprotein antibody, Myelin Adhesion Protein antibody


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