# Mouse/Rat Neuroglycan C/CSPG5 Alexa Fluor® 350-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF5665U
100 µg

## DESCRIPTION

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| **Species Reactivity** | Mouse/Rat |
| **Specificity** | Detects mouse and rat Neuroglycan C/CSPG5 in direct ELISAs and Western blots. In direct ELISAs, approximately 25% cross-reactivity with recombinant human Neuroglycan C is observed. |
| **Source** | Polyclonal Goat IgG |
| **Purification** | Antigen Affinity-purified |
| **Immunogen** | Chinese hamster ovary cell line CHO-derived recombinant mouse Neuroglycan C/CSPG5<br>Val31-Gln420<br>Accession # AAH55736 |
| **Conjugate** | Alexa Fluor 350<br>Excitation Wavelength: 346 nm<br>Emission Wavelength: 442 nm |
| **Formulation** | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

## 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.*

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| **Western Blot** | Optimal dilution of this antibody should be experimentally determined. |
| **Immunohistochemistry** | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

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| **Shipping** | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| **Stability & Storage** | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied |

## BACKGROUND

Neuroglycan C (NGC; also CSPG5 and CALEB) is a 120-150 kDa type I transmembrane glycoprotein and member of the neuregulin family of proteins (1-2). Depending on its expression profile, NGC may be a glycoprotein of 120 kDa, or a chondroitin sulfate (CS) proteoglycan of 150 kDa (2-3). Mouse NGC is synthesized as a 566 amino acid (aa) precursor that contains a 30 aa signal sequence, a 393 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 122 aa cytoplasmic region. The ECD contains one CS attachment domain (aa 32-273), with CS attachment at Ser117, one EGF-like domain (aa 371-413), three potential sites for N-linked glycosylation, and ten potential sites for O-linked glycosylation (4). Splicing variants produce four isoforms for human NGC. Isoform 1 is the standard form. Isoform 2 has a deletion of aa 487-513, while isoform 3 has an alternative start site at Met82 and the same deletion. Isoform 4 has a 56 aa substitution for aa 514-566. Phosphorylation likely occurs at Ser249, and proteolysis generates a 75 kDa soluble fragment (5). Over aa 31-420, mouse NGC shares 84% aa identity with human NGC. NGC is expressed in nervous tissue and is found on retinal ganglion cells, cerebellar Purkinje cells and hippocampal neurons (6). NGC may function as a growth and differentiation factor involved in neuritogenesis. One study shows that the recombinant ectodomain of NGC core protein enhances neurite outgrowth from rat neocortical neurons in culture via phosphatidylinositol 3-kinase and protein kinase C signaling pathways (7). Another study states that NGC is a novel component of midkine receptors, a heparin-binding growth factor that promotes cell attachment and process extension in oligodendroglial precursor-like cells (3). NGC also acts as a growth factor by directly binding ErbB3 tyrosine kinase and transactivating ErbB2 (1).

## PRODUCT SPECIFIC NOTICES





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