

DESCRIPTION

Species Reactivity	Mouse/Rat
Specificity	Detects mouse and rat Neurocan in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse Neurocan Asp23-Asp637 Accession # NP_031815
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*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.

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

PREPARATION AND STORAGE

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

Neurocan is a 220 kDa nervous tissue-specific chondroitin sulfate proteoglycan member of the aggrecan/versican proteoglycan family (1). Mouse Neurocan is synthesized as a 1268 amino acid (aa) precursor that contains a 22 aa signal sequence and a 1246 aa mature chain. The mature chain contains one Ig-like V-type domain (aa 37-157), two Link domains (aa 159-254 and 258-356), two EGF-like domains (aa 960-996 and 998-1034), one C-type lectin-like domain (aa 1036-1165), one Sushi domain (aa 1165-1224), and five potential sites for N-linked glycosylation. Mature mouse Neurocan is 90% and 66% aa identical to mature rat and human Neurocan, respectively. Neurocan binds with high affinity to the cell adhesion molecules (CAM) Ng-CAM and N-CAM to inhibit Neuronal adhesion and neurite growth (2-3). In the developing rat retina, the expression of Neurocan is regulated both temporally and spatially, which suggests that it may play a role in the differentiation of and neural network formation of the mammalian retina (1). Injury to the CNS leads to permanent loss of function due to the inability of severed nerve fibers to regenerate back to their targets (4). The lack of CNS repair is attributed in part to the extracellular matrix chondroitin sulfate proteoglycans, such as Neurocan, which are produced by activated glial cells post-injury (4).

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