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PRODUCT DATASHEET

# Anti-Neurofilament light polypeptide (NF-L), DG-Sensor™ Antibody (1D44)

## Product Details

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| **Available Variants** | 100 µg (SKU:M-2123-100) |
| **Conjugate** | Unconjugated |
| **Isotype** | IgG1 |
| **Clone** | 1D44 |
| **Host Species** | Mouse |
| **Format** | IgG |
| **Physical State** | Lyophilized |
| **Buffer** | Lyophilized from PBS buffer pH 7.2-7.6 with 0.1% trehalose, and sodium azide |
| **Production Notes** | Protein G purified |
| **Applications** | ELISA, ICC, IF, IHC, WB |
| **Dilution Ranges** | WB: 1:1000-1:2000<br>ICC: 1:1000 |
| **Species Reactivity** | Bovine, Human, Mouse, Pig, Rat |
| **Immunogen** | The antibody has been made against a proprietary recombinant construct containing amino acids of human NF-L expressed in and purified from E Coli. |
| **Specificity** | Species cross-reactivity includes human, rat, mouse, cow, and pig. These are antibodies which recognize epitopes in a small segment of the neurofilament NF-L subunit which are normally not accessible to antibodies but which became available on degeneration in natural or native conditions. Under reduced or proteinase treated tissues or Western blot, these antibodies are all specific for NF-L from a variety of species. |
| **Storage** | Spin vial briefly before opening. Reconstitute with 100 µL sterile-filtered, ultrapure water to achieve a 1 mg/mL concentration. Centrifuge to remove any insoluble material. Store lyophilized antibody at 2-8°C After reconstitution of |

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| | lyophilized antibody, aliquot and store at -20°C for a higher stability. Avoid freeze-thaw cycles. Store at 4°C for up to one month for short term storage and frequent use. |
| **UniProt ID** | P07196<br>UniProt Summary: Neurofilaments usually contain three intermediate filament proteins: NEFL, NEFM, and NEFH which are involved in the maintenance of neuronal caliber. May additionally cooperate with the neuronal intermediate filament proteins PRPH and INA to form neuronal filamentous networks. |
| **Country of Origin** | United States |
| **Shipping** | 25°C (ambient) |
| **Expiration** | 12 months after date of receipt (unopened vial). |
| **Usage Statement** | For research use only. |
| **NCBI Gene ID** | 4747 |

## Product Images

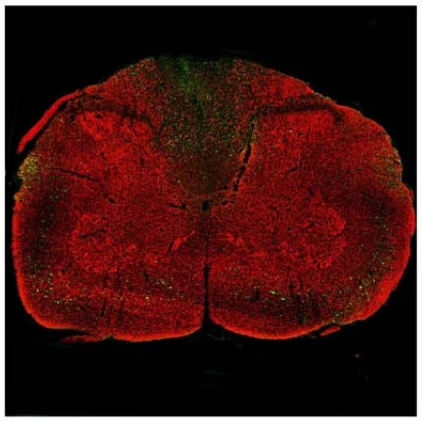


Image of an complete rat coronal section with a three-day-old midline C4 contusion injury by **Immunofluorescence and Immunohistochemistry**. The section was stained with M-2123-100, Neurofilament light polypeptide (NF-L), DG-Sensor™, Clone 1D44, Mouse mAb, (green), and co-stained with product R-2113-50, Neurofilament light polypeptide, C-terminus, (NF-L-Ct), Rabbit pAb, (red). Positive M-2123-100 staining is most visible in the dorsal columns, corticospinal tracts, and rubrospinal tracts; it is less common in the lateral and ventral funuculi; and it is least common but not entirely absent in the gray matter of the spinal cord. The presence of full length NF-L detected by our C-terminal rabbit NF-L antibody, R-2113-50, results in red staining of healthy neurons.

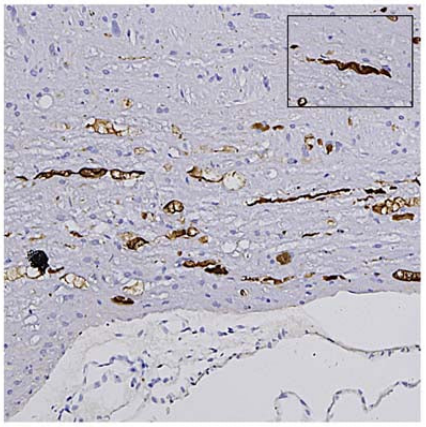
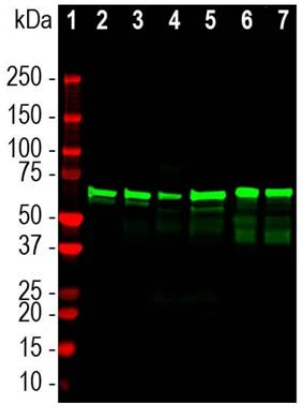


Image of formalin-fixed paraffin-embedded sections of a mouse model of ALS (Acta Neuropathol. 2016 Jan; 131(1): 103-114) by **Immunohistochemistry**. The section was stained with M-2123-100, Neurofilament light polypeptide (NF-L), DG-Sensor™, Clone 1D44, Mouse mAb. These heterozygous G85R-SOD1-YFP mice do not develop ALS unless primed with mutant SOD1 aggregates, indicating that this is a model of prion induction of pathogenesis. Degenerated processes were seen in the sciatic nerve, spinal cord fibers, and, as shown here, the brain stem after this mouse was injected with mutant SOD1. The inset depicts a helical typical of degenerating processes.




Analysis by **western blot** of NF-L expression in different tissue lysates with M-2123-100, Neurfofilament light (NF-L), DG-Sensor™ Clone 1D44, Mouse mAb, (green, 1:000) with a band at approx 68-70kDa. Lane 1: protein standard (red); Lane 2: rat brain; Lane 3: rat spinal cord; Lane 4: mouse brain; Lane 5: mouse spinal cord; Lane 6: bovine spinal cord; Lane 7: pig spinal cord. The lower molecular weight a bands found in the samples are most likely proteolytic forms of NF-L.