

Neurofilament-L (C28E10) Rabbit mAb (Alexa Fluor® 555 Conjugate)



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rev. 02/26/16

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Species Cross-Reactivity	Isotype
IF-F Endogenous	H, M, R	Rabbit IgG

Description: This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 555 fluorescent dye and tested in-house for immunofluorescent analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated Neurofilament-L (C28E10) Rabbit mAb #2837.

Background: The cytoskeleton consists of three types of cytosolic fibers: actin microfilaments, intermediate filaments, and microtubules. Neurofilaments are the major intermediate filaments found in neurons and consist of light (NFL), medium (NFM), and heavy (NFH) subunits (1). Similar in structure to other intermediate filament proteins, neurofilaments have a globular amino-terminal head, a central α -helical rod domain, and a carboxy-terminal tail. A heterotetrameric unit (NFL-NFM and NFL-NFH) forms a protofilament, with eight protofilaments comprising the typical 10 nm intermediate filament (2). While neurofilaments are critical for radial axon growth and determine axon caliber, microtubules are involved in axon elongation. PKA phosphorylates the head domain of NFL and NFM to inhibit neurofilament assembly (3-4). Neurofilament accumulations are found in many human neurological disorders including Parkinson's disease (in Lewy bodies along with α -synuclein), Alzheimer disease, Charcot-Marie-Tooth disease, and Amyotrophic Lateral Sclerosis (ALS) (1).

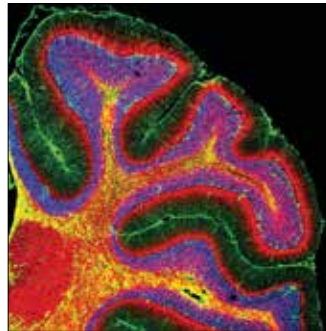
Specificity/Sensitivity: Neurofilament-L (C28E10) Rabbit mAb (Alexa Fluor® 555 Conjugate) detects endogenous levels of total Neurofilament-L protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide surrounding Glu450 of human Neurofilament-L protein.

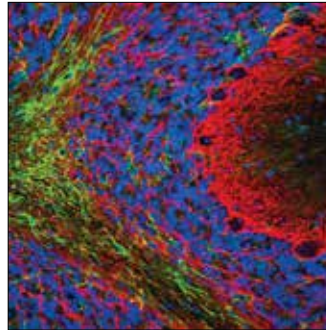
Background References:

- (1) Al-Chalabi, A. and Miller, C.C. (2003) *Bioessays* 25, 346-355.
- (2) Cohlberg, J.A. et al. (1995) *J. Biol. Chem.* 270, 9334-9339.
- (3) Hisanaga, S. et al. (1994) *Mol. Biol. Cell* 5, 161-172.
- (4) Sihag, R.K. et al. (1999) *J. Neurochem.* 72, 491-499.

Rat Cerebellum



20x zoom



Confocal immunofluorescent analysis of normal rat cerebellum using Neurofilament-L (C28E10) Rabbit mAb (Alexa Fluor® 555 Conjugate) (red) and GFAP (GA5) Mouse mAb #3670 (green). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

Entrez-Gene ID #4747
UniProt ID #P07196

Storage: Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. *Protect from light. Do not freeze.*

Recommended Antibody Dilutions:

Immunofluorescence (IF-F) 1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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U.S. Patent No. 5,675,063