

# p-NF-L ( Ser 57): sc-16667

## BACKGROUND

Neurofilament-L (for neurofilament light polypeptide, or NF-L), a member of the intermediate filament family, is a major component of neuronal cytoskeletons. Neurofilaments are dynamic structures; they contain phosphorylation sites for a large number of protein kinases, including protein kinase A, protein kinase C, cyclin-dependent kinase 5, extracellular signal regulated kinase, glycogen synthase kinase-3 and stress-activated protein kinase  $\gamma$ . In addition to their role in the control of axon caliber, neurofilaments may affect other cytoskeletal elements, such as microtubules and actin filaments. Changes in neurofilament phosphorylation or metabolism are frequently observed in neurodegenerative diseases, including amyotrophic lateral sclerosis (ALS), Parkinson's disease and Alzheimer's disease. Calcium/calmodulin-dependent protein kinase II (CamKII) phosphorylates NF-L at Ser 57 under induced long term potentiation. This phosphorylation event suggests a relationship between neuronal signal transduction and phosphorylation at Ser 57 *in vivo*.

## REFERENCES

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## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## CHROMOSOMAL LOCATION

Genetic locus: NEFL (human) mapping to 8p21.2; Nefl (mouse) mapping to 14 D1.

## SOURCE

p-NF-L ( Ser 57) is available as either goat (sc-16667) or rabbit (sc-16667-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Ser 57 phosphorylated NF-L of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16667 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

p-NF-L ( Ser 57) is recommended for detection of Ser 57 phosphorylated NF-L of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-NF-L (Ser 57) is also recommended for detection of correspondingly phosphorylated NF-L in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NF-L siRNA (h): sc-36048, NF-L siRNA (m): sc-36049, NF-L shRNA Plasmid (h): sc-36048-SH, NF-L shRNA Plasmid (m): sc-36049-SH, NF-L shRNA (h) Lentiviral Particles: sc-36048-V and NF-L shRNA (m) Lentiviral Particles: sc-36049-V.

Molecular Weight of p-NF-L: 68 kDa.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.