

Ordering Information
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 Phone 352-372-7022
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HGNC Name: NEFH
UniProt: P12036 (human)
RRID: Pending
Immunogen: phosphorylated axonal form of NF-H from bovine spinal cord
Format: 96 Well ELISA
Storage: Store at 4°C
Recommended dilutions:
 CSF or blood samples from animals or individuals with CNS injury or degeneration

References:

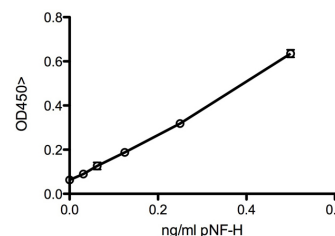
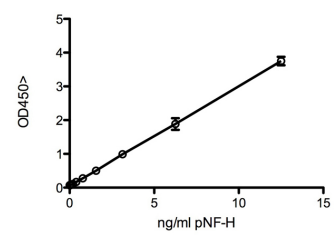
1. Sternberger LA, Sternberger NH. Monoclonal antibodies distinguish phosphorylated and nonphosphorylated forms of neurofilaments in situ. *PNAS* 80:6126-6130 (1983).
2. Lee VM et al. Identification of the major multiphosphorylation site in mammalian neurofilaments. *PNAS* 85:1998-2002 (1998).
3. Shaw G et al. Hyperphosphorylated neurofilament NF-H is a serum biomarker of axonal injury. *Biochem. Biophys. Res. Commun.* 336:1268-1277 (2005).
4. Petzold, A. and Shaw, G. Comparison of two ELISA methods for measuring levels of the phosphorylated neurofilament heavy chain. *J. Immunol. Methods* 319:34-40 (2007).
5. Boylan K et al. Phosphorylated neurofilament heavy subunit (pNF-H) in peripheral blood and CSF as a potential prognostic biomarker in amyotrophic lateral sclerosis. *J. Neurochem.* 111:1182-91 (2009).
6. Shaw G. The use and potential of pNF-H as a general blood biomarker of axonal loss: an immediate application for CNS injury. *Chapter 21* in book "Brain Neurotrauma: Molecular, Neuropsychological, and Rehabilitation Aspects" Edited by Firas Kobeissy, CMC Press, 289-300 (2015).
7. Siman, R. et al. Biomarker evidence for mild central nervous system injury after surgically-induced circulation arrest. *Brain Res.* 1213:1-11 (2008).
8. Lewis, S. et al. Detection of phosphorylated NF-H in the cerebrospinal fluid and blood of aneurysmal subarachnoid hemorrhage patients. *J Cereb Blood Flow Metab. Epub Mar 5* (2008).
9. Schlaepfer WW, Lee C, Lee VM, and Zimmerman UJ. An immunoblot study of neurofilament degradation in situ and during calcium-activated proteolysis. *J. Neurochem.* 44:502-9 (1985).
10. Pant HC. Dephosphorylation of neurofilament proteins enhances their susceptibility to degradation by calpain. *Biochem. J.* 256:665-8 (1988).
11. Stys PK. General mechanism of axonal damage and its prevention. *J. Neurol. Sci.* 233:3-13 (2005).
12. Buki A and Povlishock JT. All roads lead to disconnection? - Traumatic axonal injury revisited. *Acta Neurochir. (Wien).* 148:181-93 (2005).
13. Boylan KB. et al. Immunoreactivity of the phosphorylated axonal neurofilament H subunit (pNF-H) in blood of ALS model rodents and ALS patients: evaluation of blood pNF-H as a potential ALS biomarker. *J. Neurochem.* 111:1182-91 (2009).
14. Matsushige T, et al. CSF neurofilament and soluble TNF receptor 1 levels in subacute sclerosing panencephalitis. *J. Neuroimmunol.* 205:155-9 (2008).
15. Pasol et al. Phosphorylated Neurofilament Heavy Chain Correlations to Visual Function, Optical Coherence Tomography, and Treatment. *Mult. Scler. Int.* 542691 (2010).
16. Toedebusch CM. et al. Cerebrospinal Fluid Levels of Phosphorylated Neurofilament Heavy as a Diagnostic Marker of Canine Degenerative Myelopathy. *J. Vet. Intern. Med.* 31:513-20 (2017).
17. Mashita et al. Combination of serum phosphorylated neurofilament heavy subunit and hyperintensity of intramedullary T2W on magnetic resonance imaging provides better prognostic value of canine thoracolumbar intervertebral disc herniation. *J. Vet. Med. Sci.* 77:433-8 (2015).
18. Boylan KB. et al. Phosphorylated neurofilament heavy subunit (pNF-H) in peripheral blood and CSF as a potential prognostic biomarker in amyotrophic lateral sclerosis. *J. Neurol. Neurosurg. Psychiatry.* 84:467-72 (2013).
19. Gresle MM. et al. Serum phosphorylated neurofilament-heavy chain levels in multiple sclerosis patients. *J. Neurol. Neurosurg. Psychiatry.* 85:1209-13 (2014).

pNFH-ELISA, version 2

ELISA-pNFH-V2

Applications	Host	Isotype	Molecular Wt.	Species Cross-Reactivity
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CSF and blood pNF-H detection	NA		~220kDa by SDS-PAGE, real molecular weight ~110kDa	Hu, Rt, Ms, Pi, Co
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Abbreviation Key:

mAb—Monoclonal Antibody pAb—Polyclonal Antibody WB—Western Blot IF—Immunofluorescence ICC—Immunocytochemistry IHC—Immunohistochemistry E—ELISA Hu—Human Mo—Monkey Do—Dog Rt—Rat Ms—Mouse Co—Cow Pi—Pig Ho—Horse Ch—Chicken Dr—D. rerio Dm—D. melanogaster Sm—S. mutans Ce—C. elegans Sc—S. cerevisiae Sa—S. aureus Ec—E. coli.