

NF-light™ Serum

ELISA.

NEW

NEURODEGENERATION / NEUROTRANSMITTER



Simple!

NF-light™ Serum ELISA.

Neurofilaments are the backbone of the neuronal cytoskeleton. Inside the axons, the phosphorylation and dephosphorylation of the neurofilaments regulate the expansion and contraction of the microtubules, respectively. The neurofilament light chain (NFL), derived directly from the central nervous system (CNS), provides many advantages for the detection of neurodegenerative diseases. NFL is the stoichiometrically most common form, compared to the medium (NFM) and heavy (NFH) chain isoforms.

The new NF-light™ Serum ELISA – developed by Uman Diagnostics, a Quanterix company – has made it easy for every lab to research neurodegenerative diseases by measuring NF-light values in serum.

This serum ELISA is a Research Use Only assay for quantitative measurements of human NFL protein in serum samples. The kit is intended for professional use.

So far, all the research on serum NF-light has been performed using the SIMOA® platform. The new NF-light™ Serum ELISA correlates well to the SIMOA NF-light Advantage kit, with an R^2 of 0.90 and a measurement level around 27% higher than the SIMOA kit.

The assay was developed by UmanDiagnostics, a company focusing on the development of immunochemical tools for fast and accurate determination of neurological and traumatic injuries.

UmanDiagnostics
A Quanterix Company

The NF-light™ (Neurofilament light) serum ELISA is co-exclusively distributed by IBL International (cat.no. 30210101).

PRODUCTS

30210101

NF-light™ Serum ELISA

Schematic illustration of neurofilament subunits

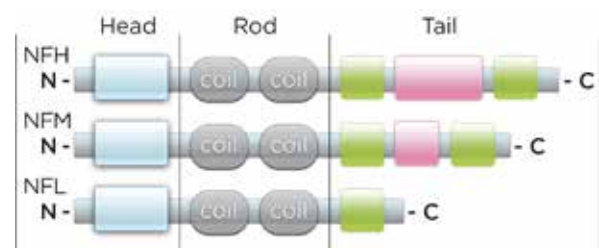


Figure 1

Correlation between the NF-light Serum ELISA and the SIMOA NF-light™ Advantage kit

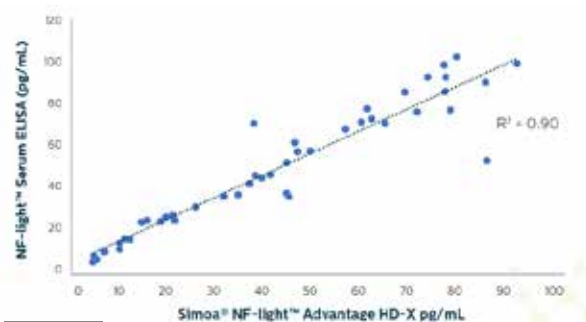


Figure 2

NEUROFILAMENT LIGHT IN MULTIPLE SCLEROSIS

Research demonstrates that cerebrospinal fluid (CSF) and serum NF-light values are highly correlated, in patients with multiple sclerosis (MS). Furthermore, serum and CSF NF-light levels go down during successful therapy, providing a mechanism for monitoring efficacy. Last but not least, NF-light values depend on the amount of axonal destruction, meaning that the more axonal destruction that can be seen, the higher the NF-light values.^{1,2}

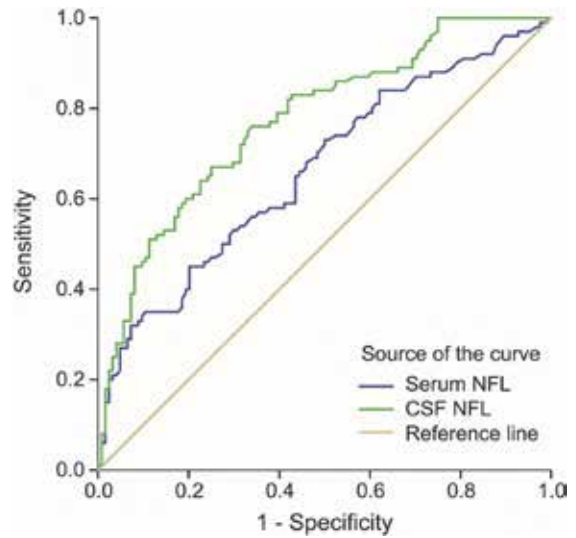


Figure 3 ROC curves of CSF and Serum NF-Light values. CSF and Serum NF-Light are highly correlated.¹

NEUROFILAMENT LIGHT IN AMYOTROPHIC LATERAL SCLEROSIS

A current study shows that CSF and serum NF-light levels are significantly higher in amyotrophic lateral sclerosis (ALS) patients during the first months following the appearance of symptoms, even in those patients that would only be clinically characterized as ‘suspected of ALS’. Therefore, measuring serum NF-light can potentially enhance diagnostic accuracy of ALS soon after symptom onset.³

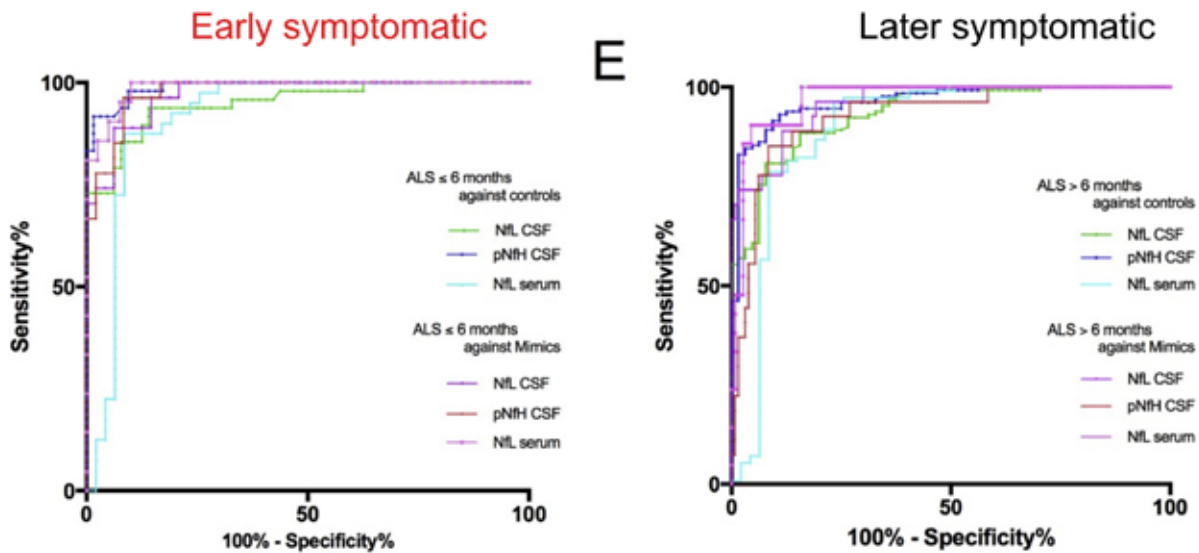


Figure 4 CSF and Serum NF-light levels in ALS patients.³

1. Novakova L. et al. Monitoring disease activity in multiple sclerosis using serum neurofilament light protein. *Neurology*, 2017, 89, 2230-2237.
 2. Kuhle J. et al. Blood neurofilament light chain as a biomarker of MS disease activity and treatment response. *Neurology*, 2019, 92(10), e1007-e1015.
 3. Feneberg E L. et al. Multicenter evaluation of neurofilaments in early symptom onset amyotrophic lateral sclerosis. *Neurology*, 2018, 90(1), e22-e30.

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