

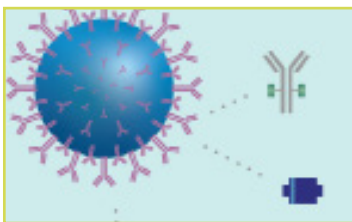
Simoa® Bead Technology



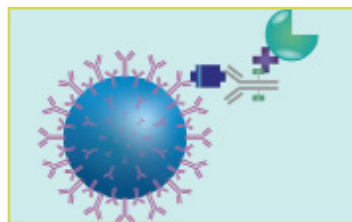
Single-molecule measurement of biomarkers for increased sensitivity.

Simoa® assays can detect neurological biomarkers, such as Neurofilament Light (NfL), GFAP and several others associated with brain injury and disease. With Simoa, these informative markers can be detected at much earlier stages, in serum or plasma, enabling better understanding of the long-term effects and disease pathology without invasive measures.

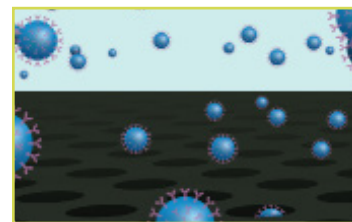
TECHNOLOGY OVERVIEW



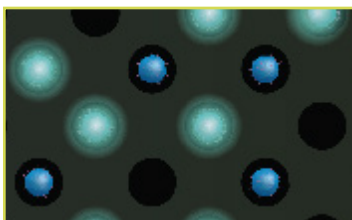
1 Beads, consisting of paramagnetic particles coupled with antibodies that bind to specific targets, are added to a sample.



2 Target-specific biotinylated detection antibodies and a streptavidin reporter enzyme conjugate are subsequently added. The goal is to form an immunocomplex consisting of a bead, analyte, detection antibody, and reporter enzyme.



3 The sample is loaded onto a disc with ~240,000 microwells. Each microwell is sized to admit one, and only one, bead. This allows for ultrasensitive detection of analyte.



4 The presence of a bound protein is indicated by a fluorescent signal from the bead. Results are digital, meaning each bead either contains an analyte, along with the detection antibody, or it doesn't.



5 These results can be viewed and analyzed on the system or exported to commonly used LIMS system.

MS-RELATED ASSAYS KITS

Simoa®**NF-light™ Advantage Kit**
Part# 103186

Simoa®**NF-light™ Advantage V2 Kit**
Part# 104073

Simoa®**GFAP Discovery Kit**
Part# 102336

Simoa®**Neurology 2-PlexB Kit (NF-light and GFAP)**
Part# 103520

Simoa® technology powers innovative research around the globe



Quanterix has a strategic focus in multiple sclerosis (MS) and is working with a rapidly growing network of academic researchers and pharmaceutical and biotech partners to drive advancements in neuro health research. Below is a sampling of over 200 publications on Multiple Sclerosis.

Comparison of three analytical platforms for quantification of the neurofilament light chain in blood samples: ELISA, electrochemiluminescence immunoassay and Simoa.

Clin Chem Lab Med. 2016;54:1655-61.

Activation Markers in CSF and Serum From Patients With Primary Progressive Multiple Sclerosis: Potential of Serum GFAP as Disease Severity Marker?

Frontiers in neurology. 2019;10.

Profiling individual clinical responses by high-frequency serum neurofilament assessment in MS.

Neurology(R) neuroimmunology & neuroinflammation. 2019;6:e555.

Serum GFAP in multiple sclerosis: correlation with disease type and MRI markers of disease severity.

Scientific reports. 2020;10:10923.

Sustained reduction of serum neurofilament light chain over 7 years by alemtuzumab in early relapsing-remitting MS.

Multiple sclerosis (Houndmills, Basingstoke, England). 2021:13524585211032348.

MRI Lesion State Modulates the Relationship Between Serum Neurofilament Light and Age in Multiple Sclerosis.

Neuroimaging. 2021.

NfL predicts relapse-free progression in a longitudinal multiple sclerosis cohort study: Serum NfL predicts relapse-free progression.

EBioMedicine. 2021;72:103590.

Serum neurofilament light chain levels in healthy individuals: a proposal of cut-off values for use in multiple sclerosis clinical practice.

Multiple sclerosis and related disorders. 2021:103090.

Serum neurofilament light chain for individual prognostication of disease activity in people with multiple sclerosis: a retrospective modelling and validation study.

The Lancet Neurology. 2022;21:246-257.

Longitudinal analysis reveals high prevalence of Epstein-Barr virus associated with multiple sclerosis.

Science. 2022.

SIMOA® BEAD TECHNOLOGY SYSTEMS

The Quanterix SR-X™:

The first benchtop instrument to offer true multiplex detection at both acute and baseline levels.



The Simoa HD-X Analyzer™:

Delivering fully-automated ultra sensitive biomarker detection you can count on.

Visit quanterix.com
for more information



For more information or scan the QR code with your smart phone camera to be directed to a complete archive of publications.