



Nanoscale Proteomic Assay Services

Superior Assay Sensitivity with the Smallest of Sample Sizes

Nanolnk's revolutionary new nanoarray platform can simultaneously analyze multiple protein biomarkers from as little as 2 µl of sample with fully-automatable precision and speed. Based on patented Dip Pen Nanolithography® (DPN®) technology, this platform is ideal for the detection, identification, and quantitation of clinically relevant, low abundance proteins from a wide variety of sample types. With their extensive experience in proteomic analysis, Nanolnk's contract research organization offers a comprehensive line of DPN-based protein assay services. Customers can choose from complete assay development and analysis projects to protein profiling work to custom array printing. Owing to DPN's ability to deposit highly reproducible, submicron protein features, Nanolnk's protein array services deliver unmatched assay sensitivity even with the smallest of sample sizes. Just as importantly, nanoscale protein arrays enable multi-parallel, high throughput analysis.

Custom assay development & analysis

Protein profiling

Custom array printing

Technology transfer

More Data With Less Sample

Multiplexed Nanolnk assays consume much smaller sample and reagent volumes than do traditional ELISA and bead-based assays, generating more data with less starting material and lowering assay costs for tests that are typically expensive to run. Nanolnk's small sample volume requirement is especially critical when working with rare and hard-to-collect samples like:

- tumor xenografts
- rodent serum and urine
- cerebral spinal fluid
- saliva
- sweat
- tears
- tissue extracts
- dried blood spots

While it is often necessary to pool samples from many animals or from time course studies on a single animal in order to generate the sample volumes required for traditional assays, Nanolnk assays eliminate the need for pooling and enable the analysis of more samples, faster.

Unmatched Assay Sensitivity

The nanoarray advantage of small sample size does not come at the cost of sensitivity. Nanolnk's miniaturized and multiplexed assays achieve sensitivities as low as 200 femto-grams/ml with 2 µl of sample, comparable to or better than the sensitivities of ELISA and bead-based assays that consume 50 µl of sample.

Cytokine	Nanolnk Kit LLOQ (pg/ml)	Bead-Based Assay Kit* LLOQ (pg/ml)
IL-1 β	0.20	11
IL- 2	1.85	10
IL- 4	0.79	2
IL- 5	0.30	1
IL- 6	0.38	5
IL- 8	0.47	4.1
TNFα	1.23	3.6
IFNγ	4.21	6

*University of Illinois, Chicago results. LLOQ is the lowest concentration that can be accurately and reproducibly recovered with precision (100±25% of expected concentration)



*Think big.
Work nanoscale.*

Figure 1: Nanolnk assays demonstrate superior sensitivity



Multiplex, High Throughput Analysis

DPN technology is capable of depositing 48 features in each sub-array and patterning as many as 96 sub-arrays per modified glass slide. By employing 96 and 384-well sample microplates and commercially available lab automation systems, all of which are compatible with nanoarrayed slides, Nanolnk can simultaneously analyze multiple proteins in a fully automated fashion.

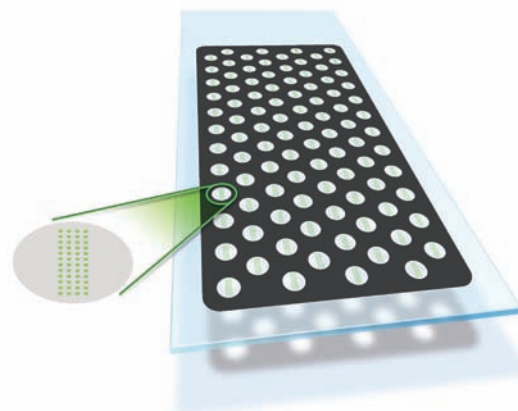


Figure 2: Schematic of a 96 sub-array assay slide with 48 features per sub-array

Customized and Client-Focused

Each contract service project begins with the client specifying their proteins of interest. Nanolnk's dedicated contract research team then works in close consultation with the customer to design and print ideally-patterned nanoscale arrays and to develop the optimal assay conditions and protocols for the proprietary set of arrays. Nanolnk can deliver the arrays and optimized protocols for subsequent screening in the client's own laboratory. Alternatively, Nanolnk can conduct the on-array assays, extract and analyze the resultant data, develop a comprehensive final report that includes image files and raw data, and rapidly deliver this report to the client.

Comprehensive Line of Proteomic Services and Products

Nanolnk helps its customers address major proteomic challenges with a full spectrum of contract services, instrument systems, and assay kits for nanoscale protein analysis.

Experience nanoscale now.

Find out more at www.nanolnk.net/nanobio or 847-679-3432.



Figure 3: Completely configured Nanolnk assay



Figure 4: NanoArray Assay System

