

Nanoscale Human Angiogenesis Assay

Identifies 10 angiogenesis biomarkers

2 μ l sample size

Low abundance protein detection

Automated or bench-scale process

Nanolnk has developed the first and only commercially-available *nanoscale assay* for the detection and quantitation of low abundance proteins typically associated with cancer and other disease states. Based on patented Dip Pen Nanolithography® (DPN®) technology, Nanolnk's Human Angiogenesis Assay measures a panel of ten angiogenic biomarkers: ANG, EGF, FGF, TNF α , HGF, IL8, Leptin, PIGF, VEGF, and HB-EGF.

Angiogenic factors have been strongly implicated as prognostic markers of tumor growth and metastasis; significant research efforts are underway to develop prognostic assays that measure angiogenic protein levels. Angiogenic factors have also shown promise for:

- Developing anti-angiogenic/vascular targeting therapies
- Predicting response to a given anti-angiogenic drug
- Monitoring anti-angiogenic drug activity as a validated surrogate marker
- Facilitating translational research studies
- Developing neovascular age-related macular degeneration therapies
- Diagnosing sickle cell disease

Unfortunately, for all of these applications the samples available for angiogenesis assays are often limited in quantity and quite precious. Tests run on Nanolnk's miniaturized and multiplexed array platform consume much smaller sample volumes than do more traditional assays, generating more data with less starting material and detecting proteins that other platforms may miss.

Minimal Sample Size

While single-plex ELISAs and bead-based multiplex assays require at least 50 μ l of sample, Nanolnk's revolutionary nanoarray platform can detect multiple angiogenesis biomarkers simultaneously from as little as 2 μ l of sample. This is especially important for applications that depend on rare and hard-to-collect samples like tumor xenografts, rodent serum and urine, cerebrospinal fluid, tissue extracts, and dried blood spots. By miniaturizing sample volumes, the Nanolnk platform makes it possible to extract usable protein biomarker data from precious samples and lowers assay costs for tests that are typically expensive to run.

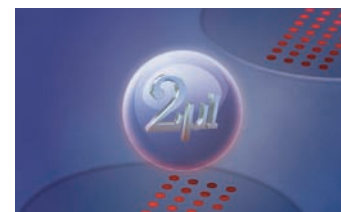
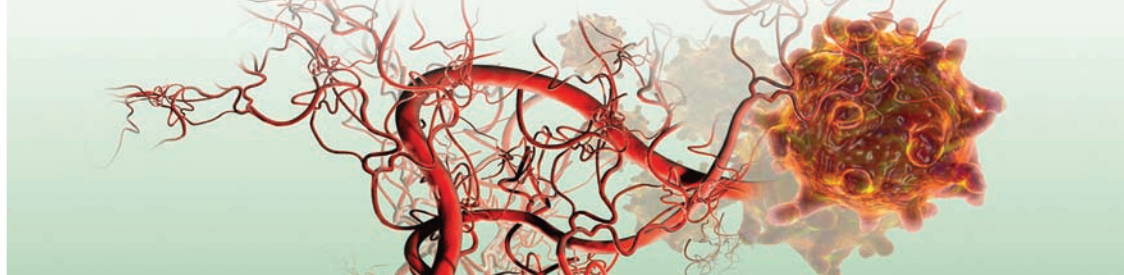


Figure 1: Nanolnk assays require just 2 μ l of sample

*Think big.
Work nanoscale.*



Low Abundance Protein Detection

Nanolnk protein nanoarrays can achieve significantly higher sensitivity than alternative immunoassay platforms and traditional microarrays. Because DPN technology is capable of depositing highly uniform, submicron protein features in each sub-array, nanoarray assays can deliver sensitivity in the 100 femtograms/ml range, even with the smallest of sample sizes.

Automated or Bench-Scale Process

The Human Angiogenesis Assay is flexible enough to meet any throughput need. Nanoarrayed slides of analyte-specific antibodies and controls are composed of 48 sub-arrays, with 96 features per sub-array. Twelve different proteins (each printed in eight replicates) are represented within each 96-feature sub-array. Nanoarrayed slides are fully compatible with 96 and 384-well sample microplates, commercially available lab automation systems, and Nanolnk SBS compliant consumables so that customers have the choice of multi-parallel, high throughput testing or simple bench top analysis utilizing standard immunoassay protocols and fluorescent detection methods.

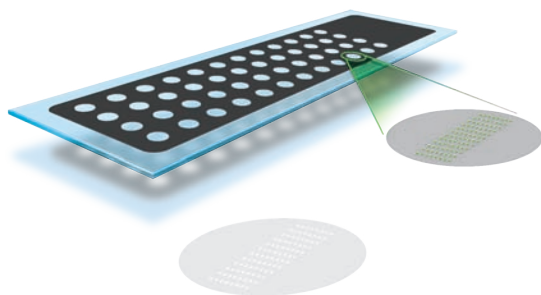


Figure 2: Schematic of a 48 sub-array assay slide with 96 features per sub-array

Comprehensive Line of Proteomic Services and Products

Nanolnk helps its customers address major proteomic challenges with a full spectrum of array-based instrument systems, assay kits, and contract services for nanoscale protein detection. Our full-service contract research programs include:

- Complete custom assay development and analysis
- Protein profiling
- Custom array printing

Additional Nanolnk assays now in development will target proteins implicated in various disease states and toxicological responses.

Experience nanoscale now.

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



Figure 3: Human Angiogenesis Assay kit
(NanoArray Processing Apparatus and associated parts are sold separately.)



Figure 4: NanoArray Assay System