

▶ Proteomics Products & Services

Our proteomics products and services include the use of custom synthesized peptide microarrays based on the PepArray™ technology which enables the total customization of content on each individual microarray to suit your needs.

The technology allows us to synthesize thousands of custom peptides (sequences can be defined to each single amino acid residue) on an addressable array to act as kinase substrates, antibody epitopes, or protein binding ligands. We can perform enzymatic/binding reactions in a high-throughput format and generate quantitative results in a controllable, enclosed environment with minimal sample usage.

PepArray™ technology is made available to you as a service for multiple applications. Our comprehensive services includes sequence retrieval from public databases and literature, and/or assistance with your sequence designs, binding and enzymatic assays using protein kinases, antibodies, or other proteins provided by you, single or dual color detection of the binding using a suitable method, image data processing, and signal data processing.

KINASE PROFILING MICROARRAY SERVICE

LC Sciences provides a comprehensive kinase analysis service utilizing high density protein kinase substrate (PKS) peptide microarrays synthesized on PepArray™ microfluidic chips for proteomic scale kinase profiling, quantitative measurement of kinase kinetic activities in the absence or presence of protein kinase inhibitors, and drug discovery research. This comprehensive service includes synthesis of standard or customized peptide array, performing enzymatic assay, array data acquisition, data analysis and completion of report. Two-three weeks after receiving your kinase sample(s), we send you a data summary report containing background subtraction, control and reference signal guided data processing, list of detected signals, and data averaging. We offer additional services for in-depth kinetic data analysis and curve analysis of quantitative measurements.

EPITOPE MAPPING MICROARRAY SERVICE

LC Sciences now offers a comprehensive epitope mapping service for high throughput, high-resolution identification of epitopes and other protein-protein interactions. Through the use of overlapping peptides as epitopes on a custom synthesized addressable peptide microarray (PepArray™), we can systematically screen thousands of sequences in a single experiment. A proprietary microarray platform and advanced microfluidic technologies ensure quantitative measurements of binding events. This combination of high-throughput capacity with quantitative measurement enables us to quickly and efficiently identify high affinity and high specificity target binding compounds. Epitope mapping assays are applicable for immunological studies, vaccine development, and biosensor development.

PHOSPHOPEPTIDE BINDING MICROARRAY SERVICE

The PepArray™ technology also provides the flexibility of synthesizing microarrays containing probes with modifications such as phosphopeptides, peptidomimetics, other amino acid analogs or various other types of modifications. Incorporation of modifications greatly increases the number of applications for these microarrays. Two-four weeks after receiving your sample (s), we send you the analyzed data, representative and original images of the array, and raw data. We offer additional services for in-depth binding data analysis and curve analysis of quantitative measurements.

PROTEIN BINDING MICROARRAY SERVICE

LC Sciences provides a comprehensive service for custom peptide microarray experiments utilizing high density peptide and epitope microarrays synthesized on PepArray™ microfluidic chips for quantitative assays using recombinant proteins/ antibodies or serum samples. These quantitative assays are applicable for immunological studies, vaccine development, and biosensor development. This comprehensive service includes assistance with your sequence designs, binding assays using sample(s) provided by you, single or dual color detection of the binding using a suitable method, image data processing, and signal data processing. Two-four weeks after receiving your sample(s), we send you a data summary report containing background subtraction, control and reference signal guided data processing, list of detected signals, and data averaging. We offer additional services for in-depth binding data analysis and curve analysis of quantitative measurements.



Tel.: (713) 664-7087
Toll Free: 1-888-528-8818
Fax: (713) 664-8181
E-mail: info@lcsciences.com
www.lcsciences.com

▶ Proteomics Products & Services

PROTEIN - APTAMER BINDING MICROARRAY SERVICE

LC Sciences provides unique aptamer microarray services using a novel μ Paraflor[®] technology, a list of aptamer sequences, and sequence design software. The aptamer microarrays are applied for protein bindings, drug candidate screening, and biosensor engineering. Our comprehensive service includes assistance with sequence design, synthesis of standard or custom DNA, RNA (2'-OMe), or peptide aptamer microarrays, and binding assays using protein targets provided by you. Our aptamer binding assays use single or dual color detection as well as quantitative measurements of the binding using a suitable method, image data processing, and signal data processing. Two-four weeks after receiving your sample(s), we send you the data result, representative and original images of the array, and raw data. We offer additional services for in-depth binding data analysis and curve analysis of quantitative measurements.

PICOLITER SCALE TITER PLATE MICROARRAYS

The PepArray[™] technology involves in situ (on chip) high density peptide synthesis and multiplex protein assays carried out in a microfluidic picoliter scale microarray. These are custom synthesized peptide microarrays (see PepArray[™] technology) containing 4K-30K features. Each feature is actually a miniature (37-270 pl) reaction chamber. We do not spot pre-synthesized peptides onto the array; instead, each peptide is synthesized in parallel in an individual reaction chamber. Not only can we synthesize a unique sequence in each chamber but our unique synthesis chemistry also makes it possible for us to vary the density of peptide synthesized in each chamber creating peptide concentration gradient plates for measuring protein dissociation constants (Kd) in a way similar to 96 or 384 well titer plates. Hundreds of Kd values are measured simultaneously on our PepArrays[™].

RECENT CUSTOMER PUBLICATIONS

- Butterfield et al. (2010) Identification and Sequence Composition Characterization of Chondroitin Sulfate-Binding Peptides through Peptide Array Screening. *Biochemistry* [Epub ahead of print].
- Williams et al. (2009) Creating protein affinity reagents by combining peptide ligands on synthetic DNA scaffolds. *J Am Chem Soc* 131 (47), 17233-41.



Tel.: (713) 664-7087
Toll Free: 1-888-528-8818
Fax: (713) 664-8181
E-mail: info@lcsciences.com
www.lcsciences.com