A Disruptive New Technology for Autoantibody Research!

Only PEPperPRINT's unique peptide microarray platform enables you to

- ✓ pinpoint and profile every possible autoimmune condition throughout an entire patient population
- ✓ order custom microarrays with up to 35,500 high fidelity peptides
- ✓ reliably receive your custom peptide microarrays within 3-5 weeks
- ✓ adjust your microarray from chip to chip and obtain rapid readouts
- ✓ benefit from the highest signal-to-noise ratios available
- ✓ cover protein conformations and posttranslational modifications

Here are some examples of PEPperPRINT's autoimmune peptide microarray applications:

- Identification of serum biomarkers in patient subgroups for a top 10 pharma company
- Screening for new prognostic peptides for a leading autoimmune diagnostic company
- Analysis of IgG and IgM responses of mouse models for a world-class research institute

What our customers say:

"Through the help of researchers at PEPperPRINT, we have identified several important lupus and arthritis associated autoantigen epitopes in a complex mouse model of autoimmunity. The comprehensive database behind these epitopes has enabled us to identify that these epitopes are mostly associated with nucleosomal or ribonucleosomal proteins. The PEPperCHIP® epitope analysis has now helped us to move on to determine the immuno pathogenic mechanisms in our autoimmune mice."

Hui-Chen Hsu, Ph.D., Associate Professor of Medicine, Division of Clinical Immunology and Rheumatology, University of Alabama at Birmingham

"We asked PEPperPRINT researchers to translate 168 antigens associated with cardiovascular diseases into 15mer peptides with a peptide-peptide overlap of 10 aa. The resulting PEPperCHIP® Discovery Microarrays with 26,364 different antigen-derived peptides were assayed with various pooled sera from patient and control groups to analyze disease-related autoantibody-antigen interactions. That way we were able to identify autoantibodies and epitopes that correlated with different cardiovascular diseases, and that provided a valuable starting point for further investigation of autoimmune responses in line with a serum cohort study."

Professor Ziya Kaya, M.D., Chief, Cardiac Observation Unit, Department of Internal Medicine, University Hospital Heidelberg, Germany

"We used PEPperPRINT's Infectious Disease Epitope Microarrays to analyze the serological response to pathogens in patients with autoimmune disease. I can highly recommend PEPperPRINT - the support I received for both technical queries and data analysis exceeded all my expectations!"

Miriam Jane Ball, Ph.D., Clinical Institute of Pathology, Medical University of Vienna, Austria

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Our **disruptive PEPperCHIP® Peptide Microarray** technology offers a variety of solutions for autoimmune research:

PEPperCHIP® Autoimmune Epitope Microarray 3.0

- covers 4,287 linear autoimmune epitopes
- including 268 citrullinated peptides and the corresponding arginine controls
- sequences of the Immune Epitope Database (www.iedb.org)

► **broad screening of autoantibody responses (e.g. IgG vs. IgM) in patient serum**

PEPperCHIP® Cyclic Citrullinated Peptide Microarray

- covers 577 different cyclic constrained peptides
- including 337 different citrullinated peptides and the corresponding arginine controls
- sequences of the Immune Epitope Database and from literature

► **screening of autoantibody responses in rheumatoid arthritis patient serum**

PEPperCHIP® Human Epitome Microarray

- covers all linear human B-cell epitopes of the Immune Epitope Database
- 29,128 different peptides covering cancer, infectious diseases, autoimmune diseases, allergens, various other diseases, healthy controls and epitopes to most vaccines
- crosses the bridge between autoimmune and infectious diseases

► **epitome-wide screening of autoantibody responses from serum against 29,128 epitopes of autoantigens, vaccines, allergens and infectious diseases**

Random Peptides for Serum Signature Discovery

- PEPperCHIP® Signature Microarrays with 5,500 linear random peptides
- PEPperCHIP® Signature Discovery Microarrays with 29,326 linear random peptides
- cyclic constrained random peptides on request

► **signature, mimotope, epitope and antigen discovery from serum samples**

High Resolution Epitope Mapping

- PEPperMAP® Linear Epitope Mapping with maximum peptide-peptide overlap
- PEPperMAP® Conformational Epitope Mapping with cyclic constrained peptides
- Epitope Substitution Scans for discovery of conserved and variable amino acids

► **autoantibody epitope mapping and fingerprint analysis, characterization of research and therapeutic antibodies**

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