

PEPperCHIP® Autoimmune Epitope Microarray

The PEPperCHIP® Autoimmune Epitope Microarray provides a perfect platform for discovering autoantibodies, elucidating serum signatures of different patient groups and comparing the signatures with known epitopes and antigens from the Immune Epitope Database (IEDB).

Features:

- 4,287 linear B-cell epitopes associated with different autoimmune diseases
- includes 286 citrullinated peptides and corresponding arginine variants
- sequence information obtained from Immune Epitope Database (<http://www.iedb.org/>)
- epitope length: 3 - 51 aa
- peptide length: 3 - 17 aa depending on the epitope length; longer epitopes were translated into overlapping 17 aa peptides
- sample requirements: 1 - 10 µl serum
- HA, c-myc and polio marker peptides routinely incorporated as on-chip QC reference

Epitopes related to autoimmune diseases of:

- urogenital tract
- blood (e.g. antiphospholipid syndrome)
- cardiovascular system
- central nervous system (e.g. multiple sclerosis)
- endocrine and exocrine system (e.g. diabetes mellitus, Sjögren's syndrome)
- eye, nose and throat
- gastrointestinal tract (e.g. Crohn's disease)
- musculoskeletal system (e.g. rheumatoid arthritis)
- peripheral nervous system
- skin and connective tissue (e.g. vitiligo)
- systemic autoimmune disease (e.g. systemic lupus erythematosus)

Analysis:

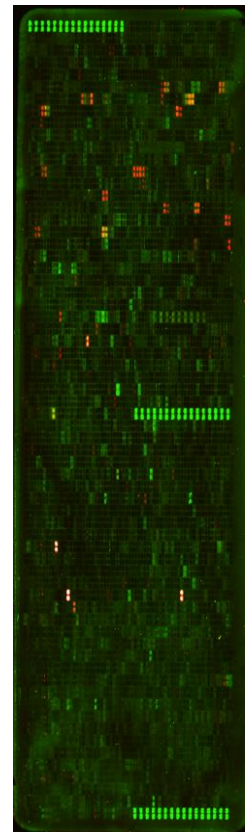
PEPperCHIP® Peptide Microarray analysis is straightforward and based on standard immunoassay protocols. PEPperPRINT also provides PEPperMAP® assay and analysis services.

Material provided by PEPperPRINT:

- PEPperCHIP® Incubation Tray: adapted to the array layout, fully reusable, for assays with low sample requirement
- PEPperCHIP® Staining Kit: contains labeled anti-HA antibody for staining of control peptides
- PepSlide® Analyzer: software solution for peptide microarray image analysis (free 14-day version available)

Material and lab infrastructure requirements:

- orbital shaker
- access to a microarray scanner: PEPperCHIP® Peptide Microarrays are compatible with most microarray scanners (e.g. GenePix 4100B, Agilent or LI-COR Odyssey Scanners)
- buffers: PBS, Tween
- blocking reagent: BSA, HSA or Rockland Blocking Buffer
- labeled secondary antibody for staining of primary samples (e.g. mouse anti-human antibody)



PEPperCHIP® Standard Peptide Microarrays

For autoimmune research:

- Cyclic Citrullinated Peptide Microarray
→ covers 577 different cyclic constrained peptides, including 335 different citrullinated peptides and the corresponding arginine controls
- Human Epitome Microarray
→ covers all linear human B-cell epitopes of the Immune Epitope Database

For infectious disease research:

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| • Bacillus Anthracis Antigen Microarray | • HIV-1 Env gp160 Microarray |
| • BK Polyomavirus Antigen Microarray | • Influenza Virus H1N1 Proteome Microarray |
| • Dengue Virus Type 1 Proteome Microarray | • Influenza Virus H5N1 Proteome Microarray |
| • Dengue Virus Type 2 Proteome Microarray | • MERS-CoV Proteome Microarray |
| • Dengue Virus Type 2 Antigen Microarray | • Vaccinia Virus Antigen Microarray |
| • Dengue Virus Type 3 Proteome Microarray | • SARS-CoV Antigen Microarray |
| • Dengue Virus Type 4 Proteome Microarray | • Tetanus Toxin Microarray |
| • Epstein-Barr Virus Antigen Microarray | • Trypanosoma Brucei Antigen Microarray |
| • Foot-and-Mouth Disease Virus Proteome Microarray | • Tick-Borne Encephalitis Virus Proteome Microarray |
| • HBV L-Protein Pre-S and S Domain Microarray | • Mycobacterium Tuberculosis Antigen Microarray |
| • HCMV Antigen Microarray | • West Nile Virus Proteome Microarray |
| • HCV Proteome Microarray | • Yellow Fever Virus Proteome Microarray |
- containing whole proteomes or selected antigens translated into overlapping peptides
- Infectious Disease Epitope Microarray
→ 3,760 epitopes associated with 196 different infectious diseases from the Immune Epitope Database

For antibody signature discovery:

- Signature Discovery Microarray
→ 35,500 random peptides

For more information, please visit our website www.pepperprint.com or contact us by phone or email.