

PEPperCHIP® Infectious Disease Peptide Microarray v2.0

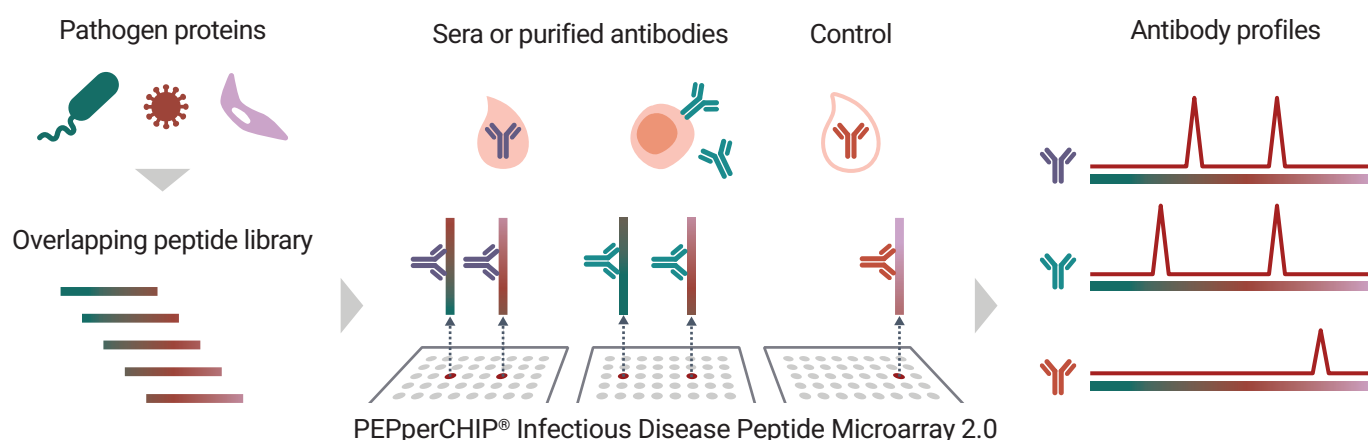
Profile antibody responses against 100+ pathogens.
Map immunogenic hotspots in one single assay.

Infectious diseases are illnesses caused by bacteria, viruses, fungi, or parasites. The infections usually spread from person to person, through contaminated food or water or through animal bites. Signs and symptoms may vary wildly depending on the organism causing the infection, ranging from mild fever and fatigue to life threatening conditions.

The PEPperCHIP® Infectious Disease Peptide Microarray v2.0 contains selected immunogenic peptides from over 100 different pathogens, and can be used to analyze antibody responses in patient sera as well as research and diagnostic antibodies on the epitope level.

APPLICATIONS

- Antibody response profiling in patient sera in the context of vaccinations or infections
- Identification of potential diagnostic or prognostic epitope signatures
- Multiplexed antibody fingerprint analysis of patient sera
- Detection of cross-reactive antibody responses across pathogen groups
- Validation of research or diagnostic antibodies against pathogens



Antibody fingerprinting workflow for infectious disease research with the PEPperCHIP® Infectious Disease Peptide Microarray v2.0. Selected immunogenic peptides are converted into overlapping peptides and printed onto glass slides. Patient sera or antibody samples are incubated on the microarray, and antibodies present in the sample bind their corresponding epitopes on the microarray surface. The resulting antibody response profiles can be compared across different samples to identify and monitor antibody reactivity against over 100 pathogens for biomarker discovery, vaccine research, or IVD/CDx development.

PRODUCT DETAILS: PEPperCHIP® INFECTIOUS DISEASE PEPTIDE MICROARRAY V2.0

Microarray content 2,511 linear antibody epitopes of 105 different viral, bacterial, parasitic, and fungal pathogens from the Immune Epitope Database

Bacteria

Bordetella pertussis (whooping cough)
Borrelia burgdorferi (lyme disease)
Chlamydia pneumoniae (pneumonia)
Chlamydia trachomatis (chlamydiosis)
Escherichia coli (dysentery)
Haemophilus influenzae (meningitis, otitis)
Helicobacter pylori (gastric/duodenal ulcer)
Mycobacterium tuberculosis (tuberculosis)
Neisseria meningitidis (meningococcal meningitis)
Orientia tsutsugamushi (scrub typhus)
Salmonella enterica (salmonellosis)

Streptococcus pyogenes (streptococcal pharyngitis)
Staphylococcus aureus (skin infections)
Treponema pallidum (syphilis)

Fungi

Aspergillus fumigatus (aspergillosis)
Candida albicans (candidiasis)

Parasites

Echinococcus multilocularis (echinococcosis)
Toxoplasma gondii (toxoplasmosis)
Trichomonas vaginalis (trichomoniasis)

Viruses

Group B coxsackieviruses (pleurodynia, myocarditis, pericarditis)
Epstein-Barr virus (mononucleosis)
Hepatitis A-E viruses (hepatitis)
Human papillomavirus (cervical cancer)
Human gammaherpesvirus 8 (Kaposi's sarcoma)
Influenza A virus (influenza)
Measles virus (measles)
Respiratory syncytial virus (pneumonia, bronchiolitis)
Severe acute respiratory syndrome coronavirus 2 (COVID-19)

Peptide lengths 5 - 15 amino acids; peptide overlap of 13 amino acids for epitopes with more than 15 amino acids

No. of peptides 5,412 / 10,824 (peptides printed in duplicate)

Positive control HA (YPYDVPDYAG) and polio (KEVPALTAVETGAT) control peptides

OTHER PEPperCHIP® PEPTIDE MICROARRAYS FOR INFECTIOUS DISEASE RESEARCH

- African Swine Fever Virus Microarray
- BK Polyomavirus Antigen Microarray
- Chikungunya Virus Microarray
- Dengue Virus Type 1 Proteome Microarray
- Dengue Virus Type 2 Proteome Microarray
- Dengue Virus Type 3 Proteome Microarray
- Dengue Virus Type 4 Proteome Microarray
- Epstein-Barr Virus Peptide Microarray
- Foot-and-Mouth Disease Virus Proteome Microarray
- HBV L-Protein Antigen Microarray
- HBV Proteome Microarray
- HCMV Antigen Microarray
- HCV Proteome Microarray
- HIV-1 (Env) Antigen Microarray
- Infectious Disease Epitope Microarray
- Influenza Virus H1N1 Proteome Microarray
- Japanese Encephalitis Virus Proteome Microarray
- MERS-CoV Proteome Microarray
- Mpox Virus Peptide Microarray
- Mycobacterium Tuberculosis Antigen Microarray
- Neglected Tropical Diseases Peptide Microarray
- Pan-corona Spike Protein Microarray
- SARS Coronavirus Proteome Microarray
- SARS-CoV Antigen Microarray
- SARS-CoV-2 Proteome Microarray
- Tetanus Toxin Microarray
- Tick-Borne Encephalitis Virus Proteome Microarray
- Trypanosoma Brucei Antigen Microarray
- Vaccinia Virus Antigen Microarray
- West Nile Virus Proteome Microarray
- Yellow Fever Virus Proteome Microarray
- Zika Virus Proteome Microarray