

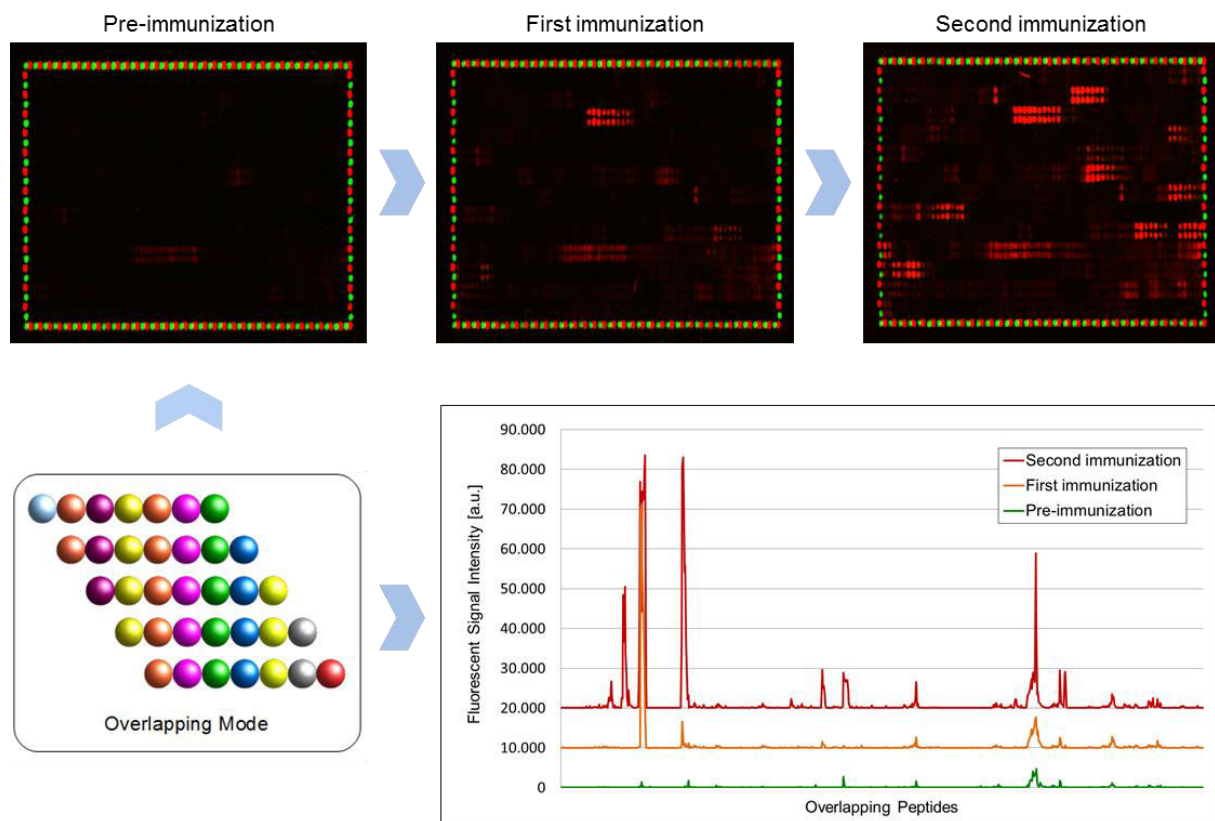


PEPperMAP® Immune Monitoring

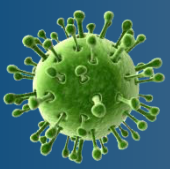
PEPperMAP® Immune Monitoring enables the fingerprint analysis of antibody responses upon immunization, vaccination or administration of a biopharmaceutical drug. In contrast to an ELISA, which only states whether antibodies against the antigen are present or not, PEPperMAP® Immune Monitoring breaks down the humoral immune response into high and low immunogenic epitopes.

A peptide microarray covering one or more proteins that are translated into overlapping peptides is first assayed with the pre-immunization sample followed by data read-out. Subsequently, the same array is assayed with the post-immunization sample. PEPperMAP® Immune Monitoring, hence, allows the clear differentiation of a raised response of an individual from a given antibody status.

Moreover, serum samples taken at different time points allow monitoring the time-resolved development of humoral immune responses after immunization, vaccination or drug administration in a uniquely high resolution manner.



PEPperMAP® Immune Monitoring with a single antigen translated into 13 aa peptides with 12 aa peptide-peptide overlap printed in duplicate: The microarray scans after incubation with the pre-immunization serum (top left) and subsequent testing of the post-immunization sera (top middle and top right) clearly highlight the increasing humoral immune response after immunization; the intensity plot (bottom right) shows the increase in antibody binding over time. The signal intensities of the post-immunization samples were leveled to provide a better overview. Stained HA (red) and Flag (green) control peptides frame the antigen-derived peptides.



Applications:

- Monitor the efficiency of immunizations and vaccinations
- Compare post-immunization vs. pre-immunization status
- Track antibody response over time
- Identify immune dominant epitopes in high resolution
- Monitor anti-drug antibodies

Input Data & Sample Material:

- Protein sequence(s) in the FASTA format or corresponding UniProt IDs
- 20 µl serum or 20 µg purified antibodies

Service:

- Staining with pre/post-immunization sera
- Staining with secondary and control antibodies
- Array read-out, data evaluation and reporting
- Deliver time 6-8 weeks

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