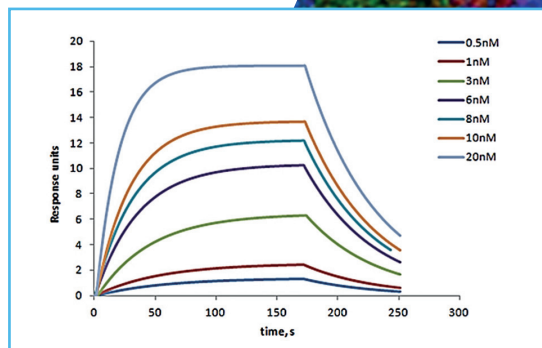


Molecularly Imprinted Polymers (MIPs) are synthetic materials capable of the selective recognition and binding of their target species, similarly to natural antibodies. However, unlike an antibody, targets are not limited to those that elicit an immune response, and our team members have created MIPs to small molecules, metabolites, peptides, proteins, viruses and more.

Applications of MIPs and nanoMIPs include diagnostics, sensors, imaging, separation and purification, and analysis.

Advantages

- Any target – from small molecules to whole viruses
- Single binding site - high affinity (typically nM K_d)
- No immune response required. No animals are used in the manufacture of MIPs
- Biocompatible and can be internalized in cells
- Robust and stable with a long shelf life:
 - Stable at extremes of pH and temperature
 - No cold chain required
 - Non-biodegradable
- Easily functionalised e.g. can be made fluorescent or magnetic
- Rapid development and manufacture

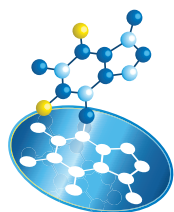


Representative SPR graph of nanoMIPs imprinted for a peptide with a K_d of 6.7nM

nanoMIPs

Versatile / Specific / Stable

A new world of diagnostics



Molecularly Imprinted Polymers

As they are synthetic polymers, MIPs can withstand harsh chemical environments such as extremes of pH, seawater, or high concentrations of organic solvents. MIPs have a very long shelf life at room temperature which makes them ideal when the cold chain cannot be guaranteed.

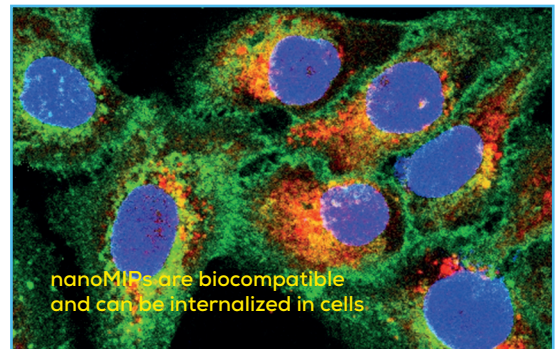
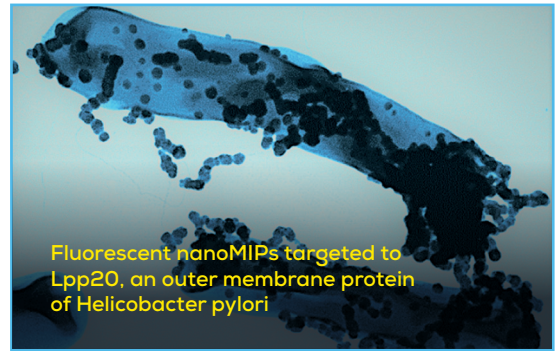
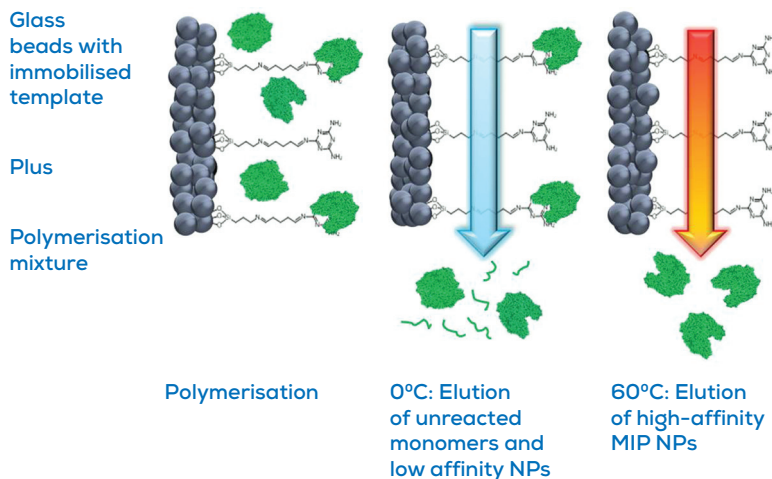
nanoMIPs

Rapid / Reliable / Robust

A new world of diagnostics

Recognition Properties

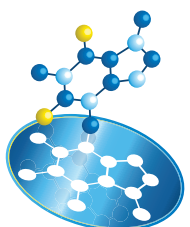
Excellent recognition properties have been achieved for small molecules, peptides and whole proteins. MIPs can be also modified with different functionalities (fluorescent, electrochemical, magnetic).



Proprietary nanoMIP design and development process enables MIP Diagnostics Ltd to provide quality controlled nanoMIPs typically within 4-6 weeks of receiving the target.

Patented nanoMIP synthesis: Template molecule is chemically immobilised on solid support, allowing collection of high affinity nanoMIPs.

Molecularly Imprinted Polymer nanoparticles (nanoMIPs) are prepared by a proprietary imprinting process involving the self-assembly of binding monomers around a target. Monomers are then polymerised to generate a nanoMIP with a single binding site: a 'synthetic antibody'.



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