

Synthetic antibody offers ultra-high sensitivity for next wave of COVID-19 sensors

MIP Diagnostics launches its COVID-19 nanoMIP for diagnostic sensors, a synthetic alternative to Abs with ultra-high sensitivity for the next wave of tests.

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[/EINPresswire.com/](#) -- [MIP Diagnostics Ltd.](#) has today announced the launch of its [COVID-19 nanoMIP](#) for diagnostic sensors, a synthetic alternative to antibodies that offers ultra-high sensitivity for the next wave of COVID-19 antigen detecting devices.

nanoMIPs are nanoscale Molecularly Imprinted Polymers, commonly known as synthetic antibodies. They are manufactured around a template molecule in a highly controlled chemical process. In this case, the nanoMIP has been manufactured around the receptor binding domain (RBD) of the SARS-CoV-2 spike protein, specific to the COVID-19 virus.

The COVID-19 nanoMIP has now undergone significant testing and has demonstrated an ultra-low limit of detection of 5 fg/ml to the RBD spike protein in a sensor device. Alongside this exceptional sensitivity performance, COVID-19 nanoMIPs also introduce an extra level of stability compared to biological receptors such as antibodies, and have been proven to withstand temperatures up to 121°C.

Alan Thomson, Chief Scientific Officer at MIP Diagnostics explained, 'Molecularly imprinted polymers, such as the COVID-19 nanoMIP are extremely rigid and robust. This is hugely important for sensor devices as it means nanoMIPs can easily be coupled to the solid surface of



MIP Diagnostics

MIP Diagnostics logo



MIP Diagnostics lab for the development of nanoMIPs

the sensor electrode. This is much more challenging with natural receptors such as antibodies or nucleic acids since they easily denature during this coupling process, which inevitably impacts the success of the device.'

Stephane Argivier, Managing Director at MIP Diagnostics Ltd. said of the launch, "We are extremely excited to introduce a solution that will drive improvements to COVID-19 rapid test sensitivity. As the industry has learned, it is extremely important that accurate testing results during the full lifecycle of the infection are achieved, and high sensitivity COVID-19 sensors will enable this.'

He added, 'The robust characteristics of nanoMIPs and chemical manufacturing processes also introduce a new level of supply consistency and security for device manufacturers that is difficult to achieve with biological receptors. This is especially important for COVID-19 antigen tests because of the huge demand and rapid manufacturing requirements we are currently seeing in the marketplace."

The MIP Diagnostics Ltd. COVID-19 nanoMIP samples are now available for diagnostic sensor developers to test.

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