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On-Chip Multi Chamber Ligh Induced Cell Growth and Monitoring Kit

Multi-chamber Lab-on-Chip that uses color-tuned light to modulate tumor progression and suppression in vitro.

Lab-On-Chip systems have been prevalently used in various fields, including clinical testing and monitoring. Researchers at Purdue University have developed a chip design to provide an in-vitro biophysical environment that mimics tumor cell progression, the metastatic process, and the induction of tumor-suppressing cells and their effect on tumors while enabling real-time monitoring of the entire process under a microscope. This technology provides an excellent environment in which to independently control light exposure.

The chip's design was inspired by preliminary data that demonstrate tumor cells proliferate under green light pulses and lose viability under blue light pulses. Our experiments also prove that tumor-suppressing cells can be induced by changing the light conditions. Each chamber is equipped with a separate light driver kit that allows for controlling the light conditions of that chamber in this design, providing a powerful Lab-On-Chip system.

Technology Validation:

Different material and sizes are being tested and selected for autoclave grade durability.

Advantages:

-Individual light chamber

-Transparent environment for monitoring

Applications:

-Lab-On-Chip

-Cell culture

Technology ID
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Category
Biotechnology & Life Sciences/Analytical & Diagnostic Instrumentation

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View online

-Cancer research

-Ibidi products

TRL: 3

Intellectual Property:

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