

Press Release

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Agilent Seahorse XF Real-Time, Live-Cell ATP Rate Assay Kit

New Assay Expands Application Range of Agilent Seahorse XF Technology

Agilent Technologies Inc. recently announced the Agilent Seahorse XF Real-Time ATP Rate Assay Kit, a new product that will enable biologists to enhance their understanding of how live-cells function in real-time.

The Seahorse XF Real-Time ATP Rate Assay Kit enables researchers to measure and quantify the rate at which cells produce adenosine triphosphate (ATP), a complex organic chemical that plays a role in many biological processes. In fact, it is the only product available that can measure ATP production from both energy-producing pathways (mitochondrial respiration and glycolysis) simultaneously.

The new assay delivers unique insights into cell phenotype and function, providing a window into the critical activities driving cell signaling, proliferation, activation, toxicity, and biosynthesis. The assay expands the application range for XF technology—which can detect discrete changes in cell metabolism and bioenergetics, as they happen—providing physiologically relevant metrics, and is more informative than the traditional method of simply measuring the total, static, end-point level of cellular ATP.

"The Seahorse XF Real-Time ATP Rate Assay Kit is a profoundly powerful tool for researchers interested in how cellular metabolism affects physiology and disease. It is a quantum leap forward for analysis using the XF Analyzer, as it enables the ability to move beyond real-time qualitative measurements, and towards quantitative accounting of the major energy-transducing pathways in the cell," said Ajit Divakaruni, Ph.D., assistant professor, of the Department of Molecular and Medical Pharmacology at UCLA.



"Moreover, this is an extraordinarily sensitive assay that offers a huge upgrade over traditional, snapshot-in-time measurements of ATP levels that are often only informative in extreme cases. In keeping with tradition, the kit is easy to use and provides reliable, straightforward data. I'm eager to see what the research community will discover with this new kit," he continued.

"We are very excited to provide our customers with another breakthrough capability that speaks to all cell biology researchers," said David Ferrick, Ph.D., senior director of the Cell Analysis Division at Agilent Technologies. "This is the first assay of its kind that provides a live-cell measure of ATP production rates from both mitochondria and anaerobic glycolysis based on XF technology. Now scientists can follow their biology as it is happening, especially in response to disease-relevant factors or other drivers of cell function, revealing those transition points where changes relevant to physiology or pathophysiology occur."

The Seahorse XF Real-Time ATP Rate Assay is easy to run, utilizing convenient data processing tools, and features an optimized single-use format to reduce complexity and simplify the workflow. Agilent designed the kit to accelerate research in fields such as biochemistry, biotechnology, oncology, immunology, cell biology, molecular biology, neurosciences, genomics, proteomics, metabolomics, toxicology, and drug discovery.

In order to learn more about the new Agilent Seahorse XF Real-Time ATP Rate Kit please contact us at

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Seahorse XF Real-Time ATP Rate Assay

