

pH-Xtra

Fluorescence-based measurement of
Extracellular Acidification



Illuminating Discovery®

Fluorescence-based measurement of Extracellular Acidification

pH-Xtra is a fluorescence-based assay that measures extracellular acidification. The assay detects changes in extracellular pH caused by the acid extrusion of either suspension or adherent cells. This allows convenient plate based analysis of glycolytic flux and can be used to monitor alterations in glucose metabolism and to confirm mitochondrial dysfunction.

Assay Principle

pH-Xtra is a soluble probe and its emission is modulated by the pH of the solution. Changes in probe luminescence therefore reflect changes in extracellular pH, with decreasing pH (acidification) causing an increase in probe emission.

The pH-Xtra probe can be used on its own to measure pH changes or multiplexed with the MitoXpress® probe to simultaneously measure oxygen consumption and pH changes on a plate-reader.

Simple "Mix and Measure" protocol

- Reconstitute probe
- Add probe to well
- Measure on standard fluorescence plate reader

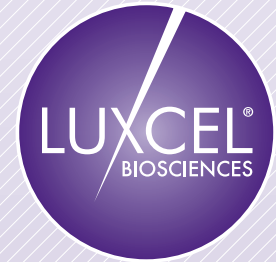
The Luxcel pH Assay

Product Name	Kit Content	Size*	Cat. No
pH-Xtra	1 vial of lyophilised water soluble pH probe	~100 assays	PH-100

* using recommended probe concentration and assay set up on a 96 well plate



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Luxcel BioSciences specialise in the development and manufacture of luminescence based sensors and related biological tests. Currently, we have sensors and tests in the following areas:

- Rapid Microbial tests for pharmaceutical and food safety applications
- High through -put tests for environmental water quality monitoring
- Assays for mitochondrial function, metabolism and toxicity screening

For application notes and product specifications, visit

www.luxcel.com

References

Hynes, J., et al., (2009). In Vitro Analysis of Cell Metabolism using a Long-Decay pH-sensitive Probe and Extracellular Acidification Assay. *Analytical Biochemistry*, 390, 21-28.

Hynes, J., et al., (2009). Fluorescent pH and Oxygen Probes of the Assessment of Mitochondrial Toxicity in Isolated Mitochondria and Whole Cells. *Current Protocols in Toxicology*.

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