

Extracellular Oxygen Consumption Reagent ab197242

[6 References](#) [2 Images](#)

Overview

Product name	Extracellular Oxygen Consumption Reagent
Detection method	Fluorescent
Sample type	Tissue, Adherent cells, Suspension cells, Purified mitochondria
Assay type	Cell-based (quantitative)
Product overview	<p>Extracellular Oxygen Consumption Reagent ab197242 is an oxygen-sensitive fluorescent dye; its fluorescence is quenched by oxygen. The dye is used in a mix-and-read, 96-well fluorescence plate reader assay for the real-time kinetic analysis of extracellular oxygen consumption rates (OCR). The oxygen consumption rate is a measure of the cellular respiration rate, and of mitochondrial function.</p> <p>The Extracellular Oxygen Consumption Reagent dye is used with an oil layer which is added on top of the assay medium to limit diffusion of oxygen into the assay medium. As mitochondrial respiration depletes the oxygen within the assay medium, quenching of the fluorescent dye is reduced, and the fluorescence signal increases proportionately.</p> <p>The dye and a suitable oil are available together in Extracellular Oxygen Consumption Assay Kit <u>ab197243</u>.</p> <p>The extracellular oxygen consumption assay that the dye is used in, is optimized for isolated mitochondria and cell cultures, and can be used with tissues, enzyme preparations, and small organisms.</p> <p>The dye excites at 360-380 nm (max 380) and emits at 630-680 nm (max 650).</p>
Notes	<p>Learn more about the full range of <u>assays to measure glycolysis, oxygen consumption, fatty acid oxidation and metabolic flux</u> in live cells.</p> <p>Or review the full <u>metabolism assay guide</u> for other assays for metabolites, metabolic enzymes, mitochondrial function, and oxidative stress.</p>
Platform	Microplate reader

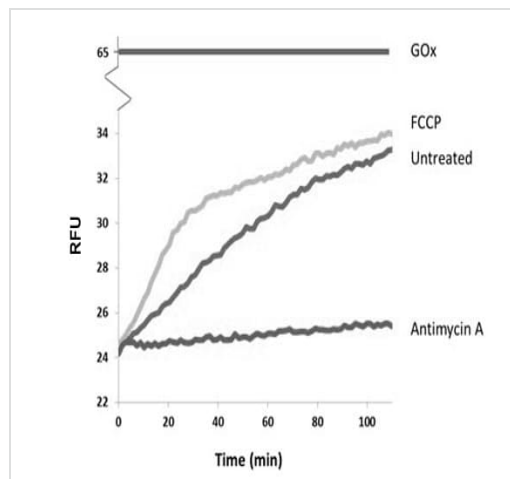
Properties

Storage instructions

Store at +4°C. Please refer to protocols.

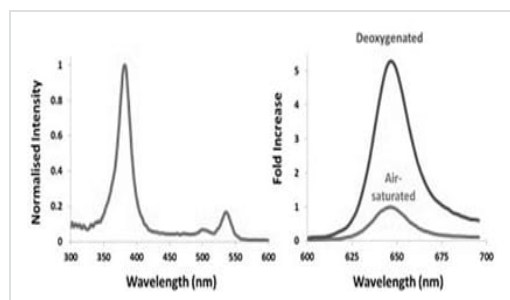
Components	96 tests	4 x 96 tests
Extracellular O ₂ Consumption Reagent	1 vial	4 vials

Images



Typical lifetime profile

Typical lifetime profile of Extracellular O₂ Consumption Assay for adherent cells, treated with different ETC compounds, including Antimycin A (recommended as a Negative Control). The effect of Glucose Oxidase as a positive Signal Control is illustrated schematically.



Excitation and emission spectra

Excitation and emission spectra of Extracellular O₂ Consumption Reagent. Left panel shows normalized excitation (Ex = 360-400nm; Peak 380nm). Right panel shows emission (Em = 630 - 680nm; Peak 650nm) in oxygenated and deoxygenated conditions.

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