

ARG81192 Intracellular ROS Assay Kit (Fluorometric)

Package: 96 assay
Store at: 4°C, -20°C

Summary

Tested Reactivity	All
Tested Application	FuncSt
Target Name	ROS
Conjugation	Un-conjugated
Conjugation Note	Read the fluorescence with a fluorescence plate reader at 480 nm excitation / 530 nm emission.
Sensitivity	0.01 nM
Sample Type	Cultured cells
Standard Range	0.01 - 10000 nM
Sample Volume	Cultured cells in either a clear or black 96-well cell culture plate.

Application Instructions

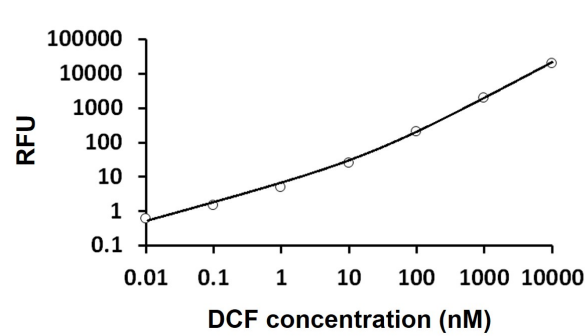
Assay Time	~ 1 hour
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Properties

Form	Liquid
Storage instruction	Store components at 4°C or -20°C. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.
Note	For laboratory research only, not for drug, diagnostic or other use.

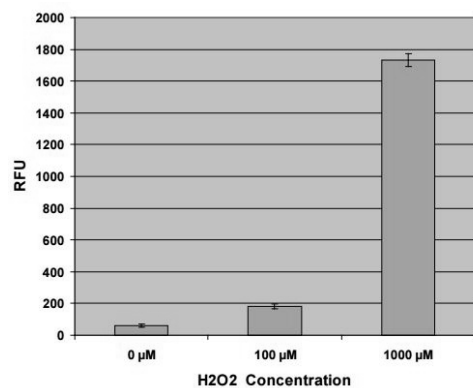
Bioinformation

Background	In chemistry and biology, reactive oxygen species (ROS) are highly reactive chemicals formed from diatomic oxygen (O ₂), water, and hydrogen peroxide. Some prominent ROS are hydroperoxide (O ₂ H), superoxide (O ₂ ⁻), hydroxyl radical (OH.), and singlet oxygen. ROS are pervasive because they are readily produced from O ₂ , which is abundant. ROS are important in many ways, both beneficial and otherwise. ROS function as signals, that turn on and off biological functions. They are intermediates in the redox behavior of O ₂ , which is central to fuel cells. ROS are central to the photodegradation of organic pollutants in the atmosphere. Most often however, ROS are discussed in a biological context, ranging from their effects on aging and their role in causing dangerous genetic mutations.[Wikipedia]
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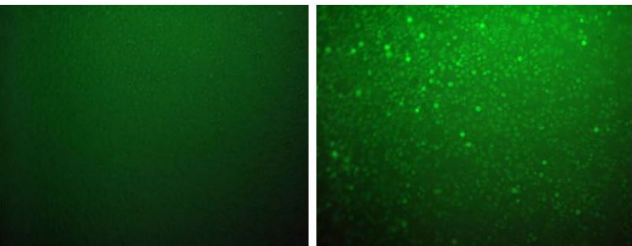
ARG81192 Intracellular ROS Assay Kit (Fluorometric) standard curve image

ARG81192 Intracellular ROS Assay Kit (Fluorometric) results of a typical standard run with optical density reading at 480 nm excitation / 530 nm emission.



ROS in HeLa cells treated with H2O2

50,000 HeLa cells in a 96-well plate were first pretreated with 1 mM DCFH-DA for 60 minutes at 37°C. Cells were then treated with various concentrations of H₂O₂ for 20 minutes.



DCF Fluorescence in HeLa cells treated with H2O2

DCF Fluorescence in H₂O₂ treated HeLa cells after 1 hour. Left: 0 µM; Right: 1000 µM.