

Product datasheet

DCF ROS/RNS Assay Kit (biofluids, culture supernatant, cell lysates) ab238535

★★★★★ [1 Abreviews](#) [10 References](#) [4 Images](#)

Overview

Product name	DCF ROS/RNS Assay Kit (biofluids, culture supernatant, cell lysates)
Detection method	Fluorescent
Product overview	DCF ROS/RNS Assay Kit (biofluids, culture supernatant, cell lysates) (ab238535) is an assay for measuring the total free radical presence of a sample.

The assay employs a proprietary quenched fluorogenic probe, dichlorodihydrofluorescein DiOxyQ (DCFH-DiOxyQ), which is a specific ROS/RNS probe that is based on similar chemistry to the popular 2', 7'-dichlorodihydrofluorescein diacetate. The DCFH-DiOxyQ probe is first primed with a quench removal reagent, and subsequently stabilized in the highly reactive DCFH form. In this reactive state, ROS and RNS species can react with DCFH, which is rapidly oxidized to the highly fluorescent 2', 7'-dichlorodihydrofluorescein (DCF). Fluorescence intensity is proportional to the total ROS/RNS levels within the sample. The DCFH-DiOxyQ probe can react with hydrogen peroxide (H₂O₂), peroxy radical (ROO·), nitric oxide (NO), and peroxynitrite anion (ONOO⁻).

The kit has a detection sensitivity limit of 10 pM for DCF and 40 nM for H₂O₂ respectively. Each kit provides sufficient reagents to perform up to 96 assays, including standard curve and unknown samples.

Notes

Related products

Review the [oxidative stress marker and assay guide](#), or the full [metabolism assay guide](#) to learn about more assays for metabolites, metabolic enzymes, mitochondrial function, and oxidative stress, and also how to assay metabolic function in live cells using your plate reader.

To measure reactive oxygen species within cells, we recommend [DCFDA / H2DCFDA - Cellular ROS Assay Kit ab113851](#). Alternative ROS assays are available in orange ([ab186028](#)), red ([ab186027](#)), and deep red ([ab186029](#)). ab238535 is used to measure ROS in biofluids, culture supernatants and cell lysates.

For assays designed to differentiate ROS, superoxides, and reactive nitrogen species: to assay ROS and superoxides use [ab139476](#); to assay ROS, superoxides, and reactive nitrogen species use [ab139473](#); to assay superoxides use [ab219943](#).

Platform

Microplate reader

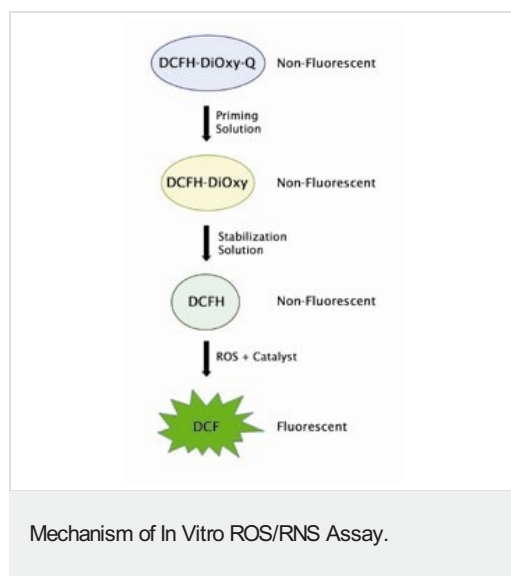
Properties

Storage instructions

Please refer to protocols.

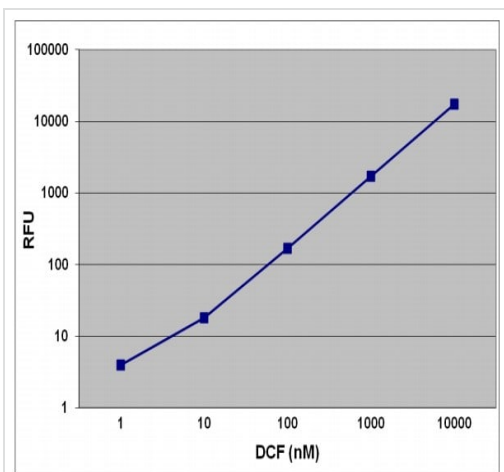
Components	96 tests
Catalyst (250X)	1 x 20µl
DCF Standard	1 x 100µl
DCF-DiOxyQ	1 x 50µl
Hydrogen Peroxide	1 x 100µl
Priming Reagent	1 x 250µl
Stabilization Solution (10X)	1 x 1.5ml

Images



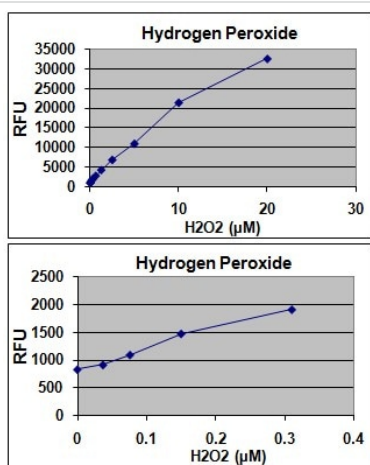
Mechanism of In Vitro ROS/RNS Assay.

Standard Curve.



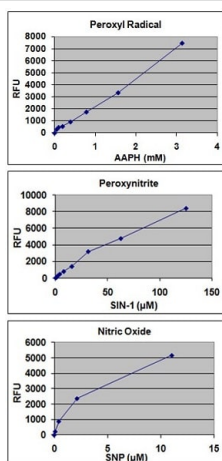
DCF Standard Curve.

Hydrogen Peroxide Standard Curve.



Hydrogen Peroxide Standard Curve.

DCF fluorescence curves for AAPH (peroxyl radical generator), SIN-1 (peroxynitrite generator), and SNP (nitric oxide generator).



Detection of Various Free Radical Species.

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