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DATASHEET

DCFDA / H₂DCFDA - Cellular ROS Assay Kit

Product overview

Name

DCFDA / H₂DCFDA - Cellular ROS Assay Kit

Cat No

HB7375

Biological description

DCFDA / H₂DCFDA is a cell permeable fluorescent probe that is redox sensitive and used to measure the concentration of reactive oxygen species (ROS) within a population of cells. DCFDA / H₂DCFDA diffuses into cells where it is hydrolysed by intracellular esterases into a non-fluorescent and non-cell permeable intermediate. Upon reaction with ROS this forms the fluorescent compound 2',7'-dichlorofluorescein (DCF) which is excited at 485nm and emits at 535nm. Pyocyanin is included within this kit as a positive control. Pyocyanin promotes the formation of ROS through inactivation of catalase and depleting reduced glutathione.

This kit contains:

- DCFDA / H₂DCFDA assay reagent
- DMSO
- Lyophilised Pyocyanin
- 10x assay buffer

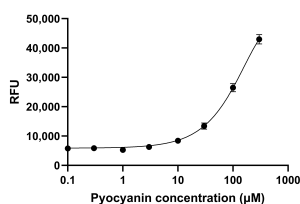
Applications

Cell Culture, FACS and flow cytometry, ICC

Description

Kit for measurement of reactive oxygen species (ROS) within cells.

Images



Biological Data

Application notes

Please follow [this link](#) to a full DCFDA / H₂DCFDA - Cellular ROS Assay Kit protocol

Solubility & Handling

Storage instructions

-20 °C

Storage of solutions

Prepare and use solutions on the same day if possible. Store solutions at -20 °C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.

Storage instructions

-20 °C

**Shipping Conditions
Important**

Stable for **ambient temperature** shipping. Follow storage instructions on receipt.
This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

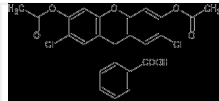
Chemical Data

Chemical name

2-[3,6-Bis(acetyloxy)-2,7-dichloro-9H-xanthen-9-yl]benzoic acid

**Molecular Weight
Chemical structure**

485.27

**Molecular Formula**C₂₄H₁₄Cl₂O₇**CAS Number**

4091-99-0

PubChem identifier

77718

SMILESCC(=O)OC1=C(C=C2C(C3=CC(=C(C=C3OC2=C1)OC(=O)C)Cl)C4=CC=CC=C4C(=O)O)Cl**InChiKey**

PXEZTIWVRVSYOK-UHFFFAOYSA-N

References

Detection of Total Reactive Oxygen Species in Adherent Cells by 2',7'-Dichlorodihydrofluorescein Diacetate Staining.

Kim H et al (2020) Journal of visualized experiments : JoVE

PubMedID[32658187](#)**The involvement of TLR2 in cytokine and reactive oxygen species (ROS) production by PBMCs in response to Leishmania major phosphoglycans (PGs).**

Kavoosi G et al (2009) Parasitology 136

PubMedID[19631014](#)
