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DATASHEET

DCFDA / H₂DCFDA - Cellular ROS Assay Kit

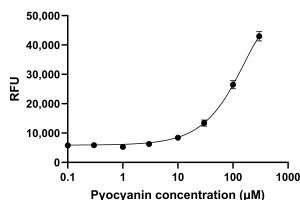
Product overview

Name	DCFDA / H ₂ DCFDA - Cellular ROS Assay Kit
Cat No	HB7375
Biological description	DCFDA / H ₂ DCFDA 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 / H ₂ DCFDA 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.
Applications	Cell Culture, FACS and flow cytometry, ICC
Description	Kit for measurement of reactive oxygen species (ROS) within cells.

This kit contains:

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

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

Important

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(acetoxy)-2,7-dichloro-9H-xanthen-9-yl]benzoic acid
Molecular Weight	485.27
Chemical structure	
Molecular Formula	C ₂₄ H ₁₄ Cl ₂ O ₇
CAS Number	4091-99-0
PubChem identifier	77718
SMILES	CC(=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](#)