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## DATASHEET

### DCFDA / H<sub>2</sub>DCFDA - Cellular ROS Assay Kit

## Product overview

#### Name

DCFDA / H<sub>2</sub>DCFDA - Cellular ROS Assay Kit

#### Cat No

HB7375

#### Biological description

DCFDA / H<sub>2</sub>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<sub>2</sub>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.

This kit contains:

- DCFDA / H<sub>2</sub>DCFDA assay reagent
- DMSO
- Lyophilised Pyocyanin
- 10x assay buffer

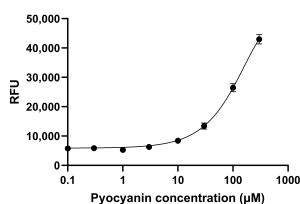
#### Applications

#### Description

Cell Culture, FACS and flow cytometry, ICC

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

## Images



## Biological Data

#### Application notes

Please follow [this link](#) to a full DCFDA / H<sub>2</sub>DCFDA - Cellular ROS Assay Kit protocol

## Solubility & Handling

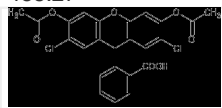
#### Storage instructions

-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(acetyloxy)-2,7-dichloro-9H-xanthen-9-yl]benzoic acid
Molecular Weight	485.27
Chemical structure	
Molecular Formula	C <sub>24</sub> H <sub>14</sub> Cl <sub>2</sub> O <sub>7</sub>
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](#)