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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 / H_2DCFDA 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_2DCFDA 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: • Lyophilised DCFDA / H_2DCFDA 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.

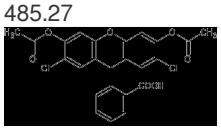
Biological Data

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(acetyloxy)-2,7-dichloro-9H-xanthen-9-yl]benzoic acid
Molecular Weight	485.27
Chemical structure	
Molecular Formula	$C_{24}H_{14}Cl_2O_7$
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