

DAF-FM DA

Photo-stable fluorescent indicator for nitric oxide (NO)

Product Information

Name :	DAF-FM 4-amino-5-methylamino-2',7'-difluorofluorescein
Catalog Number :	FP-R1227A 1 mg
Structure :	C ₂₁ H ₁₄ F ₂ N ₂ O ₅
Molecular Weight :	MW= 412,35
Solubility:	DMSO
Absorption / Emission :	$\lambda_{exc} \backslash \lambda_{em} = 500 / 515$ nm
EC (M⁻¹ cm⁻¹) :	73000 (after reaction with nitrite or nitric oxide)

Name :	DAF-FM DA 4-amino-5-methylamino-2',7'-difluorofluorescein diacetate
Catalog Number :	FP-R1228A 1 mg
Structure :	C ₂₅ H ₁₈ F ₂ N ₂ O ₇
Molecular Weight :	MW= 496.42
Solubility:	DMSO
Absorption / Emission :	$\lambda_{exc} \backslash \lambda_{em} = 500 / 515$ nm
EC (M⁻¹ cm⁻¹) :	73000 (after reaction with nitrite or nitric oxide)

Storage: -20°C Protect from light and moisture

Introduction

DAF-FM DA is a cell-permeable, photo-stable fluorescent indicator for nitric oxide (NO) with a detection limit of ~3 nM.

Intracellular esterases release the DAF-FM, that reacts with NO, in the presence of O₂, resulting in a triazolo-fluorescein analog (DAF-FM T). This compound exhibits about 160-fold greater fluorescence quantum efficiency. The fluorescence intensity is stable above pH 5.8.

Directions for use

Handling and Storage

Stored at -20°C, protected from light and moisture.

DAF-FM: 7 mM stock solution can be made by dissolving 1 mg in 0.35 mL of anhydrous DMSO.

DAF-FM DA: 5 mM stock solution can be made by dissolving 1 mg in 0.4 mL of anhydrous DMSO or 50 µg in 20 µL of anhydrous DMSO.

Aliquote the DMSO stock solution for stable storage of at least six months. Warm to room temperature before opening.

The diluted reagent should be prepared immediately before use.

FT-R1228A

Guidelines for use

Optimization may be required to use the minimum dye concentration to get the best signal to noise ratios. Also the incubation temperature can be reduced to minimize the subcellular compartmentalization.

DAF-FM

Load DAF-FM into cells by pressure injection or perfusion from a patch-clamp pipette.

Microscope settings are the usual fluorescein parameters ($\lambda_{exc./em.}$: 495 / 515 nm)

DAF-FM DA

- 1- Prepare cell slide
- 2- Add your cell buffer or medium to DAF-FM diacetate stock solution for a dilution at 1–10 μ M.
- 3- Incubate the cells with DAF-FM diacetate + buffer for 15 mn to 1 h between 4°C and 37°C.
- 4- Refresh buffer or medium and eliminate excess dye
- 5- Incubate for 15–30 minutes
- 6- Microscope settings are the usual fluorescein parameters ($\lambda_{exc./em.}$: 495 / 515 nm)

Note: Avoid Bovine serum albumine and Phenol Red that may affect the fluorescence of the DAF-FM.

Related products

- DMSO, extra dry, [BD9070](#)
- HEPES, [UP061940](#)
- PBS Buffer tablets/100ml, [UP37157](#)
- Propidium Iodide, [FP-31238B](#)

References

1. **Hao M.** *et al.*, Direct Effect of Cholesterol on Insulin Secretion, *Diabetes*, 56: 2328 - 2338 (2007) [Article](#)
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3. **Küpper F.** *et al.*, Early events in the perception of lipopolysaccharides in the brown alga *Laminaria digitata* include an oxidative burst and activation of fatty acid oxidation cascades, *Journal of Experimental Botany* 57(9):1991-1999 (2006)
4. **McCord N.** *et al.*, System γ^+ Arginine Transport and NO Production in Peripheral Blood Mononuclear Cells in Pregnancy and Preeclampsia, *Hypertension*. 47:109 (2006)
5. **Sheng J.-Z.** *et al.*, Detects Impairment of Agonist-Stimulated Nitric Oxide Synthesis by Elevated Glucose in Human Vascular Endothelial Cells: Reversal by Vitamin C and L-Sepiapterin, *J. Pharmacol. Exp. Ther.*, 315: 931-940 (2005) [Article](#)
6. **Vitecek J.** *et al.*, Measuring NO Production by Plant Tissues and Suspension Cultured Cells, *Mol Plant*, 1: 270 - 284 (2008) [Article](#)
7. **Wang R.** *et al.*, Nitrite Acts as a Transcriptome Signal at Micromolar Concentrations in Arabidopsis Roots, *Plant Physiology* 145:1735-1745 (2007) [Article](#)

Ordering information

Catalog size quantities and prices may be found at <http://www.fluoprobes.com>
Please inquire for higher quantities (availability, shipment conditions).

For any information, please ask : FluoProbes® / Interchim; Hotline : +33(0)4 70 03 73 06

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