

For research use only

Diaminofluorescein-2 (DAF-2)

Table 1. Product information

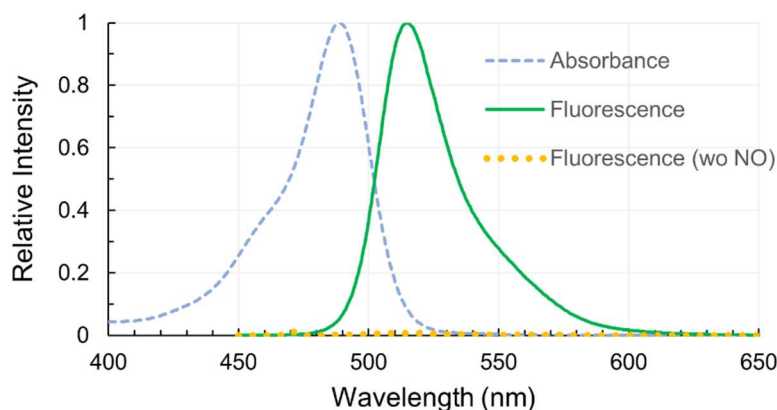
Catalog no.	Product name	Amount	Storage upon receipt	Stability
SK1001-01	Diaminofluorescein-2 (DAF-2)	1 mg (in DMSO 0.55 mL)	≤-20°C, keep desiccated and protected from light.	1 year (when unopened and stored as described.)

1. About DAF-2

Diaminofluorescein-2 (DAF-2) is a fluorescent probe to detect nitric oxide (NO). It can be used to detect NO released from either organs or cultured cells. For the detection of intracellular NO, use diaminofluorescein-2 diacetate (DAF-2 DA, SK1002-01).

2. Properties of the reagent

The reagent is provided as a colorless solution. The color of the solution will be yellow when it is diluted with aqueous solutions such as PBS (pH=7.4). It has almost no fluorescence but fluoresces upon reaction with NO, with maximum emission at 515 nm (green). Optimum excitation wavelength is 488 nm. For observation with fluorescence microscopy, blue excitation filter sets such as that for GFP and FITC is appropriate.



3. Preparation of the reagent

The reagent is a solution of 5 mM. To avoid moisture absorption, allow the vial to reach room temperature before opening the cap. Dilute the solution 500-fold with neutral buffer solution such as PBS (pH=7.4) to prepare working solution of final 10 μM. The concentration of the reagents should be optimized depending on the purpose of the experiment and the NO concentration.

4. Precautions

- 1) Prepare working solutions just before use.
- 2) The quality of the reagent may be compromised after opening the cap. Avoid repeated freeze-thaw cycles which may damage the reagent.
- 3) Use neutral buffer (pH=7 – 7.5) to dilute the reagent. Addition of bovine serum albumin (BSA), phenol red, calcium ion and vitamins may affect the fluorescence.
- 4) The reagent is dissolved in dimethyl sulfoxide which is flammable. Handle with precautions.

5. References

1. Kojima, H., Nakatsubo, N., Kikuchi, K., Kawahara, S., Kirino, Y., Nagoshi, H., Hirata, Y., and Nagano, T. (1998) *Anal. Chem.*, **70**:2446—2453
2. Nakatsubo, N., Kojima, H., Kikuchi, K., Nagoshi, H., Hirata, Y, Maeda D, Imai Y, Irimura T and Nagano, T. (1998) *FEBS Letters*, **427**:263—266

Table 2. Related Products

Catalog no.	Product name	Major applications
SK1002-01	DAF-2 DA	Detection and imaging of intracellular NO via green fluorescence.
SK1003-01	DAF-FM	Detection of NO via green fluorescence (in pH \geq 6)
SK1004-01	DAF-FM DA	Detection and imaging of intracellular NO in pH \geq 6, via green fluorescence.
SK1005-01	DAR-4M	Detection of NO in pH range of 4-12 via orange fluorescence.
SK1006-01	DAR-4M AM	Detection of intracellular NO in pH range of 4-12 via orange fluorescence.