

MAR

Table 1. Product information

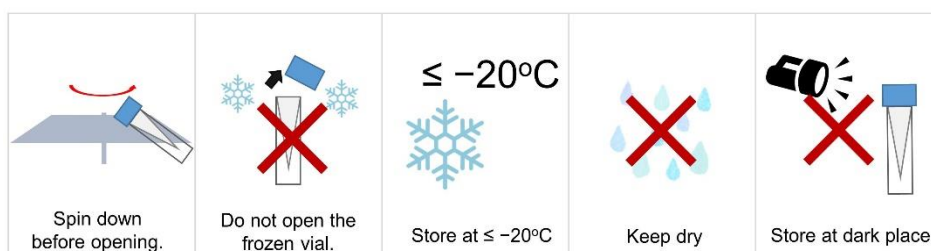
Catalog no.	Product name	Amount	Storage upon receipt	Stability
A101-01	MAR	25 µg × 5 vials	≤-20°C, keep desiccated and protected from light.	1 year (when unopened and stored as described.)

1. About MAR

MAR is a fluorescent imaging probe for detection of hypoxia. MAR is reduced and makes bright fluorescence under hypoxic condition. MAR works under the broad pH range and detects mild hypoxia, in which O₂ density is approximately 5% in living cells.

■ Storage

This product is shipped at room temperature. Upon receipt, store the product desiccated and protected from light at ≤ -20°C. Storing as a solution is not recommended.



2. An example of live cell imaging in A549 cells

■ Materials Required but not Provided

- Anhydrous dimethyl sulfoxide (DMSO)
- PBS

■ Cell culture

A549 cells are cultured in DMEM (Dulbecco's modified Eagle's medium) containing 10% fetal bovine serum (FBS) and 1% penicillin-streptomycin at 37°C, 5% CO₂. Seed the cells on to the glass bottom dish coating with poly-L-lysine 2 days before the experiment.

■ Preparation of reagent

1. Dissolve MAR in 43 µL of DMSO to prepare 1 mM stock solution.
2. Dilute the stock solution with DMEM to prepare 1 µM staining solution.
3. Wash the cell with PBS, add the staining solution to the dish and incubate for 1 hour at 37°C, 5% CO₂.
4. Wash the cell with PBS, add DMEM to the cell, put the coverslip gently on to the cell and incubated for 3 hours at 37°C, 5% CO₂.
5. Observe the cells using a fluorescence microscopy.

■ **Fluorescent observation**

For laser excitation, wavelength around 498 nm is appropriate. The fluorescence could be detected at around 520 nm. For observation by fluorescent microscopes, use blue excitation filter set for GFP. For analysis by flow cytometer, filter used for FITC is appropriate.

■ **References**

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Table 2. Related Products

Catalog no.	Product name	Major applications
GC901	FeRhoNox™-1	Detection of ferrous ions (Fe ²⁺) in Golgi.
GC903-01	FerroFarRed™	To detect Fe ²⁺ localized in ER. Deep red fluorescent reagent.
SK2001-01	ZnAF-2	Detection of Zn ²⁺ ions.
SK2002-01	ZnAF-2DA	For live cell imaging of Zn ²⁺ ions.
GC3006-01	HySOx	Detection and live cell imaging of hypochlorous acid (HOCl).
SK3001-01	HPF	Detection of hydroxyl radical (·OH) and peroxynitrite (ONOO ⁻).
SK3002-01	APF	Detection of hydroxyl radical (·OH), peroxynitrite (ONOO ⁻) and hypochlorous acid (HOCl).
SK3003-01	NiSPY-3	Detection of peroxynitrite (ONOO ⁻).