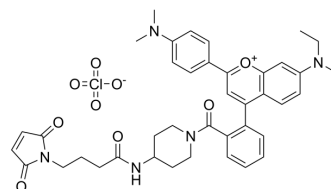


## FM-red

<b>Cat. No.:</b>	HY-D1260
<b>Molecular Formula:</b>	C <sub>41</sub> H <sub>46</sub> ClN <sub>5</sub> O <sub>9</sub>
<b>Molecular Weight:</b>	788.29
<b>Target:</b>	Fluorescent Dye
<b>Pathway:</b>	Others
<b>Storage:</b>	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 50 mg/mL (63.43 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	1.2686 mL	6.3428 mL	12.6857 mL
	5 mM	0.2537 mL	1.2686 mL	2.5371 mL
	10 mM	0.1269 mL	0.6343 mL	1.2686 mL

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

FM-red (PSH-red) is a red-emitting and environment-sensitive probe for selectively detecting and labeling protein thiols. FM-red can be used to image protein sulfhydryl groups in live cells and in vivo. FM-red also could be used to measure of the redox states of thioredoxin (Trx)<sup>[1]</sup>.

#### In Vitro

FM-red (10 μM; 30 min) is suitable for imaging protein thiols in HeLa cells<sup>[1]</sup>.  
 FM-red (20 μM; 48 h) has no significant cytotoxicity in HeLa cells<sup>[1]</sup>.  
 FM-red possesses a long emission wavelength (~655 nm) and fast response (~10 min) by binding to protein thiols<sup>[1]</sup>.  
 FM-red exhibits time- and concentration-dependent fluorescence response to bovine serum albumin (BSA)<sup>[1]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

FM-red (10 μM; 30 min) could be used to image protein thiols in zebrafishes<sup>[1]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

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[1]. Hu G, et, al. Depletion of protein thiols and the accumulation of oxidized thioredoxin in Parkinsonism disclosed by a red-emitting and environment-sensitive probe. J Mater Chem B. 2019 Apr 28;7(16):2696-2702.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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