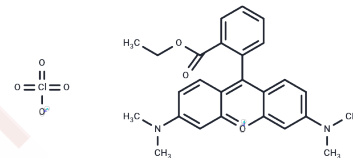


TMRE

Chemical Properties

CAS No. :	115532-52-0
Formula:	C ₂₆ H ₂₇ ClN ₂ O ₇
Molecular Weight:	514.95
Appearance:	no data available
Storage:	keep away from direct sunlight Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	TMRE (Tetramethylrhodamine ethyl ester perchlorate) is a mitochondria specific dye (λ_{ex} : 550 nm, λ_{em} : 575 nm).
Targets(IC ₅₀)	Others
In vitro	Multidirectional dynamic movement of TMRE is observed in epithelial cells and bidirectional dynamic movement is seen in the superficial cortical fiber cells of live bovine lenses. In the epithelium, the movement of TMRE fluorescence is up to 5 $\mu\text{m}/\text{min}$ whereas in the superficial cortex the observed movement is up to 18.5 $\mu\text{m}/\text{min}$. The movement of TMRE fluorescence is abolished with the treatment of the uncoupler, carbonyl cyanide m-chlorophenylhydrazone [2].

Solubility Information

Solubility	DMSO: 27.78 mg/mL (53.95 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.9419 mL	9.7097 mL	19.4194 mL
5 mM	0.3884 mL	1.9419 mL	3.8839 mL
10 mM	0.1942 mL	0.971 mL	1.9419 mL
50 mM	0.0388 mL	0.1942 mL	0.3884 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Crowley LC, et al. Measuring Mitochondrial Transmembrane Potential by TMRE Staining. Cold Spring Harb Protoc. 2016 Dec 1;2016(12):pdb.prot087361.

Bantseev V, et al. Confocal laser scanning microscopy imaging of dynamic TMRE movement in the mitochondria of epithelial and superficial cortical fiber cells of bovine lenses. Mol Vis. 2005 Jul 14;11:518-23.

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