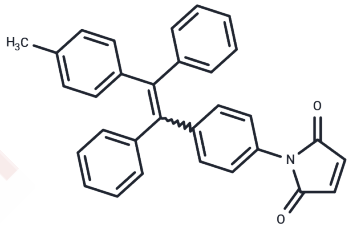
Data Sheet (Cat.No.T74247)

TargetMol

TPE-MI

Chemical Properties



CAS No. : 1245606-71-6

Formula: C31H23NO2

Molecular Weight: 441.52

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	TPE-MI (Tetraphenylethene maleimide) is an aggregation-induced luminescent agent that stains living cells, can be used to capture cysteines in exposed unfolded proteins, and detects protein damage after dihydroartemisinin studies of malaria parasites.
Targets(IC50)	Others,Parasite,Huntingtin
Cell Research	TPE-MI cell staining 1. Solution preparation: TPE-MI is dissolved in DMSO as a 1 or 2 mM stock solution. The stock solution is stored at 4°C in the dark. 2. Operation steps 1. Cultivate cells to a suitable state, rinse with PBS to remove residual culture medium, and treat with freshly diluted TPE-MI (50 μM PBS solution) at 37°C for 30 minutes; 2. Rinse with PBS to remove residual TPE-MI solution; 3. Application examples 1) Flow cytometry analysis: Resuspend cells in PBS, precipitate by centrifugation (120 g reaction, 6 minutes), and then resuspend in 250 μL PBS in a flow cytometry tube for detection and analysis. 2) Fluorescence imaging: Fix cells on the plate with 4% paraformaldehyde. 3) SDS-PAGE: The stained cells were lysed on the plate by adding native lysis buffer and analyzed by 12% acrylamide SDS-PAGE. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 41.25 mg/mL (93.43 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 2 mg/mL (4.53 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2649 mL	11.3245 mL	22.649 mL
5 mM	0.453 mL	2.2649 mL	4.5298 mL
10 mM	0.2265 mL	1.1325 mL	2.2649 mL
50 mM	0.0453 mL	0.2265 mL	0.453 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Chen MZ, et al. A thiol probe for measuring unfolded protein load and proteostasis in cells. Nat Commun. 2017 Sep 7;8(1):474.

Hu Q, et al. In Situ Monitored Vortex Fluidic-Mediated Protein Refolding/Unfolding Using an Aggregation-Induced Emission Bioprobe. Molecules. 2021;26(14):4273. Published 2021 Jul 14.