Product Data Sheet

Product Name: TP-TRFS
Cat. No.: GC61555

Chemical Properties

Cas. No.	2937819-61-7		
SMILES	CC(C1=CC=C2C=C(C=CC2=C1)NC(OC3CSSC3)=O)=O		
Formula	$C_{16}H_{15}NO_3S_2$	M.Wt	333.43
Solubility		Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	TP-TRFS		

Background

TP-TRFS is a highly selective and the first two-photon fluorescent probe of thioredoxin reductase (TrxR)[1].

TP-TRFS (10 μM) exhibits weak fluorescence (φ = 0.57%, absolute quantum yield), and after TP-TRFS (10 μM)) is incubated with TCEP (1 mM), a dramatic fluorescence increment at 490 nm is observed (φ= 22.31%, absolute quantum yield) and the fluorescence intensity of the test system increased by B40-fold within 3 h[1].

TP-TRFS has the ability to visualize the TrxR activity in vivo, and also provides a mechanistic link between stroke and the loss of TrxR function, which may open up a new therapeutic window of stroke via the regulation of TrxR function[1].

[1]. Jintao Zhao, et al. Loss of thioredoxin reductase function in a mouse stroke model disclosed by a two-photon fluorescent probe. Chem Commun (Camb). 2020 Nov 12;56(90):14075-14078.

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