Product Data Sheet

Product Name: Msr-blue
Cat. No.: GC61553

Chemical Properties

Cas. No.	2966537-39-1		
SMILES	CC(C1=CC=C(C=C1O2)S(C)=O)=CC2=O		
Formula	$C_{11}H_{10}O_3S$	M.Wt	222.26
Solubility	DMSO : 25 mg/mL (112.48 mM; Need ultrasonic)	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	Msr-blue		

Background

Msr-blue is a first turn-on fluorescent probe for methionine sulfoxide reductase with a more than 100-fold fluorescence increment. Msr-blue is used for monitoring the enzyme activity in live cells (Λex=340 nm, Λem=440 nm)[1].

Msr-blue is emited blue fluorescence after activation by methionine sulfoxide reductase A (Msr A). Msr-blue responded to Msr A in both a time- and dose-dependent manner, and more than a 100-fold increase in the emission is observed. Msr-blue is converted to its corresponding sulfide (15′) under catalysis by either the purified Msr A or a cell lysate[1]. The 6-OHDA-treated PC12 cells as a cellular model of Parkinson's disease (PD) is employed and applied Msr-blue to probe the function of Msrs in the cells. With the aid of Msr-blue, a decline of the Msr activity in a PD model was disclosed for the first time[1].

[1]. Liangwei Zhang, et al. A specific fluorescent probe reveals compromised activity of methionine sulfoxide reductases in Parkinson's disease. Chem Sci. 2017 Apr 1;8(4):2966-2972.

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