

ThioFluor 623

Chemical Properties

CAS No. :	1004324-99-5
Formula:	C ₃₁ H ₃₀ N ₆ O ₁₀ S
Molecular Weight:	678.67
Storage:	Keep away from direct sunlight Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>

Biological Description

Description	The rapid, selective, and sensitive sensing of thiols is important in diverse areas of research. This thiofluor 623 responds upon exposure to thiols with an increase in fluorescence intensity of up to 120-fold. The response is selective for thiols and occurs in aqueous media. In the absence of thiols, the probe is essentially non-fluorescent; thiols cause cleavage of the probe, generating a fluorophore with an absorption maximum of 563 nm and emission at 623 nm. The fluorescence quantum yield of the cleaved product, generated in response to thiols, increases in more viscous media, suggesting ideal performance in biological systems and applicability to single-molecule or 2-photon sensing schemes. The thiofluor 623 is cell-permeable and reacts selectively with intracellular thiols. The pseudo-first order rate constant (k_{obs}) depends on substrate (e.g., $2.1 \times 10^{-3} \text{ s}^{-1}$ for cysteine, $2.0 \times 10^{-5} \text{ s}^{-1}$ for human serum albumin).
Targets(IC50)	Others

Solubility Information

Solubility	DMF: 20 mg/mL (29.47 mM), Sonication is recommended. DMSO: 20 mg/mL (29.47 mM), Sonication is recommended. ($< 1 \text{ mg/ml}$ refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.4735 mL	7.3674 mL	14.7347 mL
5 mM	0.2947 mL	1.4735 mL	2.9469 mL
10 mM	0.1473 mL	0.7367 mL	1.4735 mL
50 mM	0.0295 mL	0.1473 mL	0.2947 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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