Data Sheet (Cat.No.T18929)

TargetMol

Bromobimane

Chemical Properties

CAS No. : 71418-44-5

Formula: C10H11BrN2O2

Molecular Weight: 271.11

Appearance: no data available

Storage: store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Bromobimane (Monobromobimane) is a non-fluorescent substance, but reacts with thiols to produce a fluorescent product.Bromobimane is used as a probe, often in clinical medicine, to test for sulfide levels in blood.
In vitro	Bromobimanes in solution (aqueous or organic solvents of medium polarity) react with small thiols, and with reactive protein thiol groups (e.g., hemoglobin). The reactions of bromobimanes with thiols are second-order and dependent on pH, the active nucleophile being the thiolate anion. The reaction of bromobimane with a thiolate converts the nonfluorescent agent into water-soluble fluorescent products [1]. The highly selective, rapid reactivity of bromobimanes toward thiols, the stability and fluorescence yield of the thiol derivatives, the ease of separation of the derivatives by reversed-phase HPLC, and the availability of both cell-penetrating and nonpenetrating forms, make the use bromobimanes an extremely powerful approach to the analysis of low molecular weight biothiols [2].

Solubility Information

Solubility	DMSO: 54.22 mg/mL (199.99 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.6885 mL	18.4427 mL	36.8854 mL
5 mM	0.7377 mL	3.6885 mL	7.3771 mL
10 mM	0.3689 mL	1.8443 mL	3.6885 mL
50 mM	0.0738 mL	0.3689 mL	0.7377 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

Kosower EM, et al. Bromobimane probes for thiols. Methods Enzymol. 1995;251:133-48.
Newton GL, et al. Determination of biothiols by bromobimane labeling and high-performance liquid chromatography. Methods Enzymol. 1995;251:148-66.

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