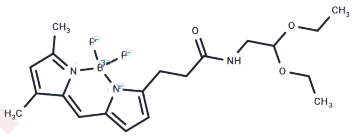
Data Sheet (Cat.No.T35568)

TargetMol

BODIPY-aminoacetaldehyde diethyl acetal

Chemical Properties



CAS No. : 247069-93-8

Formula: C20H28BF2N3O3

Molecular Weight: 407.27

Storage: 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	BODIPY-aminoacetaldehyde diethyl acetal (BAAA-DA) is a stable precursor to BODIPY-aminoacetaldehyde, a cell-permeable fluorescent substrate for aldehyde dehydrogenase (ALDH).1,2BODIPY-aminoacetaldehyde diethyl acetal is converted under acidic conditions to BODIPY-aminoacetaldehyde (BAAA).2BAAA is cell-permeant and is converted intracellularly by ALDH to BODIPY aminoacetate (BAA), which is retained by cells and can be used to identify cells with high ALDH activity.1BAA is a substrate for the efflux pump P-glycoprotein (P-gp) but co-application of BAAA with a P-gp inhibitor, such as verapamil , inhibits BAA efflux.2BAAA-DA has been used to isolate human hematopoietic progenitor cells, which have high ALDH activity, andviaflow cytometry to sort cancer stem cells that contain high levels of ALDH.1,3BAA used in cells can be excited at 488 nm and displays an emission maximum of 512 nm.4
Targets(IC50)	Others

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4554 mL	12.2769 mL	24.5537 mL
5 mM	0.4911 mL	2.4554 mL	4.9107 mL
10 mM	0.2455 mL	1.2277 mL	2.4554 mL
50 mM	0.0491 mL	0.2455 mL	0.4911 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

Storms, R.W., Trujillo, A.P., Springer, J.B., et al.Isolation of primitive human hematopoietic progenitors on the basis of aldehyde dehydrogenase activityProceedings of the National Academy of Sciences of the United States of America96(16)9118-9123(1999)
Smith, C.A., Colvin, M., Storms, R.W., et al.BODIPY aminoacetaldehyde diethyl acetal08010501.81-15(2010)
Leng, Z., Yang, Z., Li, L., et al.A reliable method for the sorting and identification of ALDHhigh cancer stem cells by flow cytometryExp. Ther. Med.(2017)
Pomper, M.G., Wang, H., Minn, I., et al.Red fluorescent aldehyde dehydrogenase (ALDH) substrate(2015)