Data Sheet (Cat.No.T32039)

TargetMol

HADA Hydrochloride

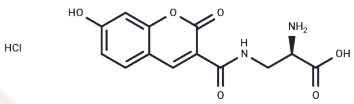
Chemical Properties

CAS No. : 2253733-10-5

Formula: C13H13ClN2O6

Molecular Weight: 328.71

Storage: Keep away from direct sunlight
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	HADA Hydrochloride (HCC-Amino-D-alanine hydrochloride) is a blue (λem~450 nm) fluorescent D-amino acid (FDAA). FDAAs are efficiently incorporated into the peptidoglycans (PGs) of diverse bacterial species at the sites of PG biosynthesis. HADA Hydrochloride can be used in specific and covalent probing of bacterial growth with minimal perturbation.
Targets(IC50)	Antibacterial,Autophagy
In vitro	FDAA labeling can be completed in as little as 30 seconds for rapidly growing species like Escherichia coli. Despite HADA Hydrochloride being dimmer and less photostable compared to FDL or TDL, it consistently and effectively labels the PG of a wide range of bacterial species, usually without requiring significant optimization[1].
Cell Research	HADA labeled PG site experiment of E. coli cells I. Solution preparation Mother solution preparation: Prepare 50 mM (100×) stock solution with DMSO; (it is recommended to store at -20 ℃ or -80 ℃ in the dark after aliquoting) II. Operation steps 1. Inoculate cells from -80°C bacterial cryopreservation solution into sterile liquid culture medium and culture cells using optimal species-specific conditions until exponential growth is achieved. 2. Add 10 μL of 50 mM HADA DMSO stock solution to the culture tube. 3. Dilute the culture to OD600 = 0.05 in fresh LB; 4. Add 990 μL of the culture to the culture tube containing FDA to obtain a final LB solution of [HADA] = 500 μM and [DMSO] = 1%, and incubate the culture at 37°C with shaking; 5. When the culture reaches OD600 = 0.4 - 0.6, pellet the cells (1 min, maximum speed in a microcentrifuge, room temperature); 6. Resuspend the cells in 1 mL 70% (vol/vol) ice-cold EtOH and fix the cells on ice for 10 - 15 min. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 112.5 mg/mL (342.25 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0422 mL	15.211 mL	30.422 mL
5 mM	0.6084 mL	3.0422 mL	6.0844 mL
10 mM	0.3042 mL	1.5211 mL	3.0422 mL
50 mM	0.0608 mL	0.3042 mL	0.6084 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

Kuru E, et al. Synthesis of fluorescent D-amino acids and their use for probing peptidoglycan synthesis and bacterial growth in situ. Nat Protoc. 2015 Jan;10(1):33-52.