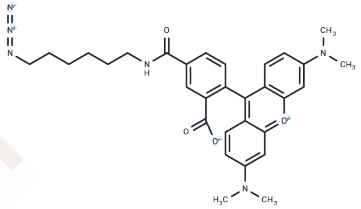
Data Sheet (Cat.No.T67840)

TargetMol

5-TAMRA Azide

Chemical Properties



CAS No. : 1006592-61-5

Formula: C31H34N6O4

Molecular Weight: 554.64

Storage: Store at low temperature,Keep away from direct sunlight,Keep away from moisture
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	5-TAMRA Azide (TAMRA Azide, isomer 5) is the orange-fluorescent probe that is compatible with various excitation sources including mercury arc, tungsten and xenon arc lamps, the 544 nm line of the Helium-Neon laser and the 532 nm green laser line. It is predominantly used for detection of terminal alkyne-tagged biomolecules via a copper-catalyzed click reaction (CuAAC).
Targets(IC50)	Others
In vitro	Instructions: I. Solution preparation 1. Stock solution: Dissolve 5-TAMRA Azide in anhydrous DMSO or DMF to prepare a 1-10 mM stock solution. The specific concentration can be adjusted according to experimental requirements. Notes: Powder: Store at -20°C in a dark, dry environment. Solution: Store at -20°C in a dark environment after aliquoting to avoid repeated freezing and thawing. II. Click Chemistry labeling 5-TAMRA Azide is a fluorescent labeling molecule commonly used in click chemistry reactions. It can react with molecules containing azide or alkyne groups to generate stable triazole bonds. 1. Reaction conditions: 1) Reaction buffer: Amine-free buffer (such as PBS or Tris-HCl) with a pH of 6.8-8.5 is usually used. 2) Catalyst system: Add Cu(I) catalysts (such as $CuSO_4$ and ascorbic acid) and stabilizers (such as triethylamine or TBTA) to accelerate the reaction. 3) After mixing, react at room temperature or with slight heating (37°C) for 1-2 hours. 2. Purification: Remove unbound 5-TAMRA Azide and byproducts by dialysis, gel filtration or HPLC. Notes Operation in dark room: 5-TAMRA Azide is light sensitive and should be handled and stored in a dark room or in dark conditions. Choice of copper catalyst: Use high-purity Cu(I) catalyst to avoid excessive byproducts in the reaction.

In vitro	Fresh preparation: It is recommended to prepare it before use to ensure reaction efficiency. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.803 mL	9.0149 mL	18.0297 mL
5 mM	0.3606 mL	1.803 mL	3.6059 mL
10 mM	0.1803 mL	0.9015 mL	1.803 mL
50 mM	0.0361 mL	0.1803 mL	0.3606 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

Kolb HC, Finn MG, Sharpless KB. Click Chemistry: Diverse Chemical Function from a Few Good Reactions. Angew Chem Int Ed Engl. 2001 Jun 1;40(11):2004-2021.
Rostovtsev VV, et al. A stepwise huisgen cycloaddition process: copper(I)-catalyzed regioselective "ligation" of azides and terminal alkynes. Angew Chem Int Ed Engl. 2002 Jul 15;41(14):2596-9.