

Product Data Sheet

Product Name: Alexa Fluor 594 azide

Cat. No.: GC82140

Chemical Properties

Cas. No. 1872449-19-8

Formula $C_{41}H_{46}N_6O_{10}S_2$

M.Wt 846.97

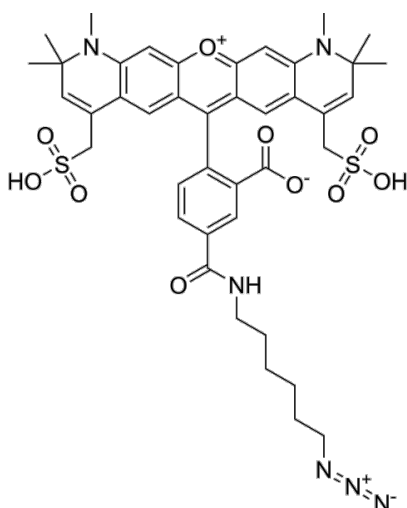
Solubility

Storage Store at 4°C, sealed storage, away from moisture and light

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Alexa Fluor 594 azide is an azide-modified fluorescent dye and also a FRET acceptor reactant. Owing to its negligible direct absorption under 488 nm excitation light, excellent photostability, and the ability of its azide group to participate in the CuAAC reaction, Alexa Fluor 594 azide can be paired with a donor dye for single-molecule imaging via TIRFM, thereby enabling the visual monitoring of CuNP-catalyzed click reactions [1].

In Vitro, As a FRET acceptor dye, Alexa Fluor 594 azide is used to verify the heterogeneous catalytic

Caution: Product has not been fully validated for medical applications. For research use only.

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properties of CuAAC click reactions catalyzed by copper nanoparticles (CuNP)^[1]. Guide (The following is our recommended protocol. This protocol is only a guide and should be modified according to your specific needs). 1. Solution preparation: Prepare an aqueous solution of 100 pM Alexa Fluor 594 azide, and mix it with an equal concentration of Alexa Fluor 488 alkyne (FRET donor) and 1 nM triethylamine, where triethylamine serves to accelerate the reaction and protect the catalyst. 2. Reaction system setup: Pump the above mixed solution into a flow cell reactor at a flow rate of 1 mL/h. The reactor substrate is a circular glass coverslip modified with APTES and spin-coated with CuNP, and the coverslip is placed on the objective lens of an Olympus TIRF microscope. 3. Single-molecule imaging detection: Irradiate the reaction system with a 488 nm laser. After removing residual donor emission light from the emitted light using a 550 long-pass filter, an EM-CCD records the signals at a rate of 10 frames/s. The reaction is monitored via bright fluorescence burst signals against a dark background.

References:

[1]. Decan MR, et al. Copper nanoparticle heterogeneous catalytic 'click' cycloaddition confirmed by single-molecule spectroscopy. Nat Commun. 2014;5:4612. Published 2014 Aug 11.

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