

Product Data Sheet

Product Name: DCP-Bio1

Cat. No.: GC80339

Chemical Properties

Cas. No. 882853-94-3

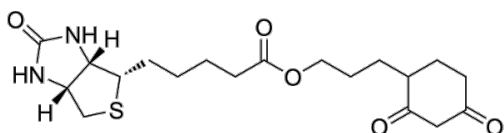
Formula $C_{19}H_{28}N_2O_5S$ M.Wt 396.5

Solubility DMSO: 100 mg/mL (252.21 mM; Need ultrasonic) 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

DCP-Bio1 is a targeting labeling reagent for cysteine sulfenic acid (cysteine sulfenic acid). DCP-Bio1 labels protein cysteine sulfenic acid in intact cells via in situ labeling, and also labels cellular proteins during cell lysis. DCP-Bio1 detects sulfenic acid modifications of FLT3 and FLT3ITD in cancer cells. DCP-Bio1 is applicable to research related to sulfenic acid labeling [1] [2]

In Vitro, DCP-Bio1 (1 mM; variable times) incorporates into sulfenic acid-containing papaya papain, Escherichia coli C84,94S fRMSr, and Salmonella typhimurium C165S AhpC with distinct first-order

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rates of 1.65 min⁻¹, 0.13 min⁻¹, and 0.003 min⁻¹, respectively^[1]. DCP-Bio1 (0.1-5 mM) incorporation into sulfenic acid-containing proteins in HEK293 cell lysates increases with decreasing protein concentration and increasing DCP-Bio1 concentration, with no difference observed between tumor necrosis factor alpha-treated and untreated cells^[1]. DCP-Bio1 (1 mM; 2 h) labels sulfenic acid residues on wild-type FLT3 in RS4-11 cells and FLT3ITD in MV4-11 and HEK293 cells, with cysteines 695 and 790 of FLT3ITD contributing significantly to the labeling signal^[2].

References:

[1]. Klomsiri C, et al.. Use of dimedone-based chemical probes for sulfenic acid detection evaluation of conditions affecting probe incorporation into redox-sensitive proteins. *Methods in enzymology*. 2010;473:77-94.

[2]. Böhmer A, et al.. Modulation of FLT3 signal transduction through cytoplasmic cysteine residues indicates the potential for redox regulation. *Redox biology*. 2020 Jan;28:101325.

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