

Product Data Sheet

Product Name: sodium 4-pentynoate

Cat. No.: GC11480

Chemical Properties

Cas. No. 101917-30-0

Chemical Name sodium pent-4-ynoate

SMILES C#CCCC(=O)[O-].[Na+]

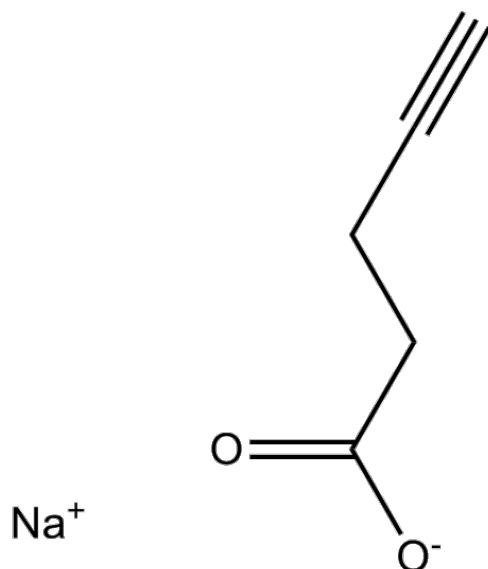
Formula C5H5NaO2 M.Wt 120.08

Solubility H_2O : 100 mg/mL (832.78 mM; Need ultrasonic); DMSO : 16.67 mg/mL (138.82 mM; Need ultrasonic) Storage Store at -20°C

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

Sodium 4-pentynoate is an alkynylacetate analogue. which could be incorporated with cellular

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Sodium 4-pentynoate is an alkyne acetate analogues, which could be incorporated into cellular proteins and utilized as chemical reporter for the profiling of acetylated proteins [1].

Reversible protein acetylation is generally regulated by lysine acetyltransferases (KATs) and lysine deacetylases (KDACs), which play important roles in regulating gene expression and occurrence of disease [1].

The p300-KAT-catalyzed acetylation with histone protein H3 showed that the the 4-pentynoate group can be efficiently transferred onto lysine residue. In jurkat cells, metabolic labeling of sodium 4-pentynoate was in time and dose dependent, which was optimal at 2.5-10 μ M of acetate analogs for 6-8 hr. Fluorescent profiling identified 194 of 4-pentynoate labeled proteins from jurkat cells, where 86% of them were identified by radioactive method and 14% was newly identified [1].

Reference:

[1]. Yang Y Y, et al. Bioorthogonal chemical reporters for monitoring protein acetylation. J Am Chem Soc., 2010, 132(11): 3640-3641.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA