

L-Azidonorleucine hydrochloride

Chemical Properties

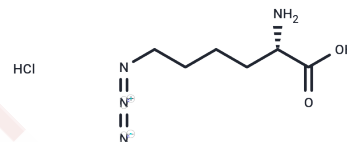
CAS No. : 1454334-76-9

Formula: C₆H₁₃ClN₄O₂

Molecular Weight: 208.646

Storage: 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	L-Azidonorleucine hydrochloride, an unnatural amino acid, serves as a substitute for Methionine, and is used for labeling mammalian cell proteins and identifying various methionyl-tRNA synthetase (MetRS) mutants.
Targets(IC50)	Others
In vitro	CHO cells transfected with pMaRSC and incubated with L-Azidonorleucine (Anl; 1.5 mM; 6 h) are fixed, permeabilized, and treated with alkyne-TAMRA. The TAMRA fluorescence is observed exclusively in mCherry-expressing cells, indicating selective incorporation of Anl into cellular proteins[1].
In vivo	When administering L-Azidonorleucine (ANL) through drinking water, it is recommended to maintain an intake of 0.9 mg/day/g body weight for 21 days to label specific brain neuronal populations. For other cell types, reduced dosages or shorter labeling durations may suffice. Alternatively, for intraperitoneal (i.p.) injection, exploring dosages between 4-400 mM is advised. Specifically, a 400 mM dose administered i.p. (10 ml/kg volume) daily for a week effectively labels certain neuronal populations, like the excitatory neurons in the hippocampus, whereas lower concentrations (e.g., 4 mM) are suitable for labeling different cell types or for extended labeling periods[2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.7927 mL	23.9636 mL	47.9272 mL
5 mM	0.9585 mL	4.7927 mL	9.5854 mL
10 mM	0.4793 mL	2.3964 mL	4.7927 mL
50 mM	0.0959 mL	0.4793 mL	0.9585 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

Alborz Mahdavi, et al. Engineered Aminoacyl-tRNA Synthetase for Cell-Selective Analysis of Mammalian Protein Synthesis. *J Am Chem Soc.* 2016 Apr 6;138(13):4278-81.

Beatriz Alvarez-Castelao, et al. Cell-type-specific metabolic labeling, detection and identification of nascent proteomes in vivo. *Nat Protoc.* 2019 Feb;14(2):556-575.

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