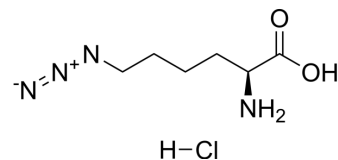


## L-Azidonorleucine hydrochloride

<b>Cat. No.:</b>	HY-131033
<b>CAS No.:</b>	1454334-76-9
<b>Molecular Formula:</b>	C <sub>6</sub> H <sub>13</sub> ClN <sub>4</sub> O <sub>2</sub>
<b>Molecular Weight:</b>	208.65
<b>Target:</b>	Biochemical Assay Reagents
<b>Pathway:</b>	Others
<b>Storage:</b>	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	H <sub>2</sub> O : 125 mg/mL (599.09 mM; Need ultrasonic)					
	<b>Preparing Stock Solutions</b>	<b>Solvent</b>	<b>Mass</b>	<b>1 mg</b>	<b>5 mg</b>	<b>10 mg</b>
		<b>Concentration</b>				
		<b>1 mM</b>		4.7927 mL	23.9636 mL	47.9272 mL
		<b>5 mM</b>		0.9585 mL	4.7927 mL	9.5854 mL
<b>10 mM</b>		0.4793 mL	2.3964 mL	4.7927 mL		
Please refer to the solubility information to select the appropriate solvent.						
<b>In Vivo</b>	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (479.27 mM); Clear solution; Need ultrasonic					

### BIOLOGICAL ACTIVITY

<b>Description</b>	L-Azidonorleucine hydrochloride, an unnatural amino acid, is a Methionine surrogate. L-Azidonorleucine hydrochloride can be used to label mammalian cell proteins and identify a diverse set of methionyl-tRNA synthetase (MetRS) mutants <sup>[1][2]</sup> . L-Azidonorleucine (hydrochloride) is a click chemistry reagent, it contains an Azide group and can undergo copper-catalyzed azide-alkyne cycloaddition reaction (CuAAC) with molecules containing Alkyne groups. It can also undergo strain-promoted alkyne-azide cycloaddition (SPAAC) reactions with molecules containing DBCO or BCN groups.
<b>In Vitro</b>	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 exclusively in the mCherry-expressing cells is observed, consistent with cell-selective incorporation of Anl into cellular proteins <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	When L-Azidonorleucine (ANL) is administered via the drinking water, an average daily L-Azidonorleucine intake of 0.9 mg/day/g of body weight for 21 d when aiming to label and identify neuronal populations of the brain are recommended. Lower dosages or shorter labeling times might be used for the labeling of other cell types. When L-Azidonorleucine is

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administered by i.p. injection, the testing different L-Azidonorleucine doses in the range of 4-400 mM are recommended. A 400 mM dosage administered by i.p. (i.p. volume: 10 ml/kg) once per day for 1 week is recommended for labeling some neuronal populations (such as excitatory neurons of the hippocampus). Lower dosages (e.g., 4 mM) can potentially be used for labeling other cell types or when longer labeling periods are desired<sup>[2]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## REFERENCES

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[1]. 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.

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

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