11-Azidoundecanoic acid

Cat. No.: HY-151655

CAS No.: 118162-45-1

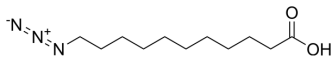
Molecular Formula: $C_{11}H_{21}N_3O_2$

Molecular Weight: 227.3

Target: ADC Linker

Pathway: Antibody-drug Conjugate/ADC Related

Storage: 4°C, protect from light
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (439.95 mM; Need ultrasonic)

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	4.3995 mL	21.9974 mL	43.9947 mL
	5 mM	0.8799 mL	4.3995 mL	8.7989 mL
	10 mM	0.4399 mL	2.1997 mL	4.3995 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (11.00 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (11.00 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (11.00 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

11-Azidoundecanoic acid is a click chemistry reagent containing an azide group. 11-Azidoundecanoic acid acts as a hydrophobic bioconjugation linker that can be further modified at the azido-position using Staudinger ligation or Click-chemistry. 11-Azidoundecanoic acid is substrate of lipoic acid ligase (LplA) for labeling[1][2]. 11-Azidoundecanoic acid 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. Strain-promoted alkyne-azide cycloaddition (SPAAC) can also occur with molecules containing DBCO or BCN groups.

In Vitro

The microbial lipoic acid ligase (LplA) can specifically attach an alkyl azide onto an engineered LplA acceptor peptide (LAP). Then the alkyl azide selectively derivatizes with cyclooctyne conjugates to various probes[1].

LplA method should provide general access to biochemical and imaging studies of cell surface proteins, using small fluorophores introduced via a short peptide tag[1].

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

REFERENCES

[1]. Fernández-Suárez M, et al. Redirecting lipoic acid ligase for cell surface protein labeling with small-molecule probes. Nat Biotechnol. 2007 Dec;25(12):1483-7.

[2]. Heal WP, et al. N-Myristoyl transferase-mediated protein labelling in vivo. Org Biomol Chem. 2008 Jul 7;6(13):2308-15.

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