DUPA

Cat. No.: HY-111606

CAS No.: 302941-52-2

Molecular Formula: $C_{11}H_{16}N_2O_9$

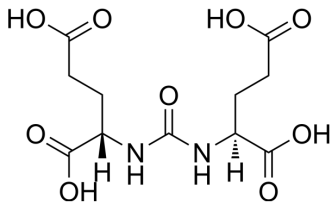
Molecular Weight: 320.25

Target: Ligands for Target Protein for PROTAC

Pathway: PROTAC

Storage:

Powder	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 300 mg/mL (936.77 mM)

H_2O : ≥ 150 mg/mL (468.38 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.1226 mL	15.6128 mL	31.2256 mL
5 mM	0.6245 mL	3.1226 mL	6.2451 mL
10 mM	0.3123 mL	1.5613 mL	3.1226 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: ≥ 7.5 mg/mL (23.42 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 7.5 mg/mL (23.42 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 7.5 mg/mL (23.42 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

DUPA, belongs to a class of glutamate ureas, is used as the targeting moiety in agent conjugate to selectively deliver cytotoxic agents to prostate cancer cells[1][2].

In Vitro

DUPA is used as the targeting moiety to actively deliver Docetaxel (DTX) for treatment of prostate-specific membrane antigen (PSMA) expressing prostate cancer[1]. The DUPA-indenoisoquinoline conjugate exhibits an IC_{50} in the low nanomolar range in 22RV1 cell cultures[2].

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	The DUPA-indenoisoquinoline conjugate induces a complete cessation of tumor growth with no toxicity, as determined by loss of body weight and death of treated mice[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Peng ZH, et al. Spacer length impacts the efficacy of targeted docetaxel conjugates in prostate-specific membrane antigen expressing prostate cancer. J Drug Target. 2013 Dec;21(10):968-80.

[2]. Roy J, et al. DUPA conjugation of a cytotoxic indenoisoquinoline topoisomerase I inhibitor for selective prostate cancer cell targeting. J Med Chem. 2015 Apr 9;58(7):3094-103.

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