

JHU395

## Chemical Properties

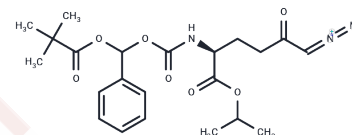
CAS No. : 2079938-92-2

Formula: C<sub>22</sub>H<sub>29</sub>N<sub>3</sub>O<sub>7</sub>

Molecular Weight: 447.48

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	JHU395 is an orally-bioavailable prodrug of a lipophilic glutamine antagonist (GA), 6-diazo-5-oxo-L-norleucine (DON). It demonstrates delivery of DON to malignant peripheral nerve sheath tumor (MPNST) both in vitro and in vivo, resulting in significant antitumor activity in MPNST. Additionally, JHU395 exhibits plasma stability.
Targets(IC50)	Apoptosis,Others
In vitro	JHU395 (1, 10, 100 μmol/L) inhibits the growth of multiple biosynthetic processes by tumor (MPNST) cells, while the growth of immortalized Schwann cells is minimally affected. JHU395 induces less PARP cleavage as a marker of apoptosis in human MPNST cells. JHU395 is a plasma-stable lipophilic GA prodrug that delivers DON to MPNST in an in vitro plasma-to-tumor cell partitioning assay measurement.[1]
In vivo	JHU395 (oral gavage; 1.2 mg/kg × 5 days, 0.5 mg/kg × 9 days) delivers active GA to tumors with over twofold higher tumor-to-plasma exposure and significantly inhibits tumor growth in a murine flank MPNST model without observed toxicity.[1]

## Solubility Information

Solubility	DMSO: 90 mg/mL (201.13 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (7.37 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2347 mL	11.1737 mL	22.3474 mL
5 mM	0.4469 mL	2.2347 mL	4.4695 mL
10 mM	0.2235 mL	1.1174 mL	2.2347 mL
50 mM	0.0447 mL	0.2235 mL	0.4469 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

Lemberg KM, et al. The novel glutamine antagonist prodrug JHU395 has antitumor activity in malignant peripheral nerve sheath tumor. *Mol Cancer Ther.* 2020;19(2):397-408.

Pham K, et al. Novel Glutamine Antagonist JHU395 Suppresses MYC-Driven Medulloblastoma Growth and Induces Apoptosis. *J Neuropathol Exp Neurol.* 2021;80(4):336-344.

Nedelcovych MT, et al. N-(Pivaloyloxy)alkoxy-carbonyl Prodrugs of the Glutamine Antagonist 6-Diazo-5-oxo-L-norleucine (DON) as a Potential Treatment for HIV Associated Neurocognitive Disorders. *J Med Chem.* 2017;60(16):7186-7198.

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Tel: 781-999-4286 E\_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481