Data Sheet (Cat.No.T35817)

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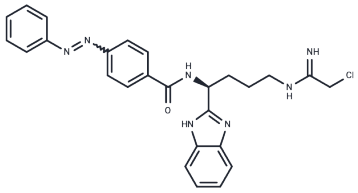
Photoswitchable PAD Inhibitor (technical grade)

Chemical Properties



CAS No. : 2226393-62-8

Formula: C26H26ClN7O

Molecular Weight: 487.98

Appearance: no data available

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

Biological Description

Description	Photoswitchable PAD inhibitor is a photoactivated protein arginine deiminase (PAD) inhibitor and a derivative of BB-Cl-amidine that contains an azobenzene photoswitch allowing optical control of PAD activity.1 Without photoactivation, it is a weak inhibitor of PAD2 (IC50 = >100 μM) and is less potent than BB-Cl-amidine in inhibiting citrulline production in vitro (kinact/KIs = 2,300, 600, 1,000, and 10,510 M-1min-1 for PAD1-4, respectively) and does not inhibit histone H3 citrullination in HEK293T cells overexpressing PAD2 when used at concentrations up to 100 μM. However, it can rapidly be photoactivated with UV-A radiation to the more active cis-isomer, which is an irreversible, competitive inhibitor of histone H3 citrullination with an IC50 value of 9.1 μM.

Solubility Information

Solubility	Methanol: 30 mg/mL (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0493 mL	10.2463 mL	20.4926 mL
5 mM	0.4099 mL	2.0493 mL	4.0985 mL
10 mM	0.2049 mL	1.0246 mL	2.0493 mL
50 mM	0.041 mL	0.2049 mL	0.4099 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.

Reference

Mondal, S., Parelkar, S.S., Nagar, M., et al. Photochemical control of protein arginine deiminase (PAD) activity. ACS Chem. Biol. 13(4), 1057-1065 (2018).

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