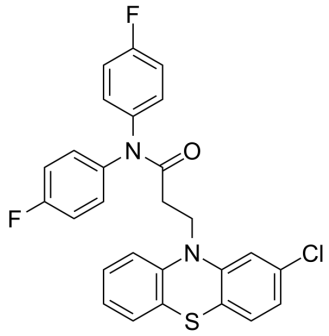
20S Proteasome activator 1

Cat. No.:	HY-150602
CAS No.:	2761578-18-9
Molecular Formula:	$C_{27}H_{19}ClF_2N_2OS$
Molecular Weight:	492.97
Target:	Proteasome
Pathway:	Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (202.85 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0285 mL	10.1426 mL	20.2852 mL
	5 mM	0.4057 mL	2.0285 mL	4.0570 mL
	10 mM	0.2029 mL	1.0143 mL	2.0285 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.07 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

20S Proteasome activator 1 is a potent 20S proteasome activator with EC_{200} values of 0.3 μM, 0.7 μM and 1.8 μM for trypsin-like site, chymotrypsin-like site and caspase-like site. 20S Proteasome activator 1 translates well in a cellular system, preventing the accumulation of the pathogenic A53T mutant of α-synuclein. 20S Proteasome activator 1 can be used for researching neurodegenerative diseases[1].

IC_{50} & Target

IC_{50}: 0.3 μM (trypsin-like site), 0.7 μM (chymotrypsin-like site), 1.8 μM (caspase-like site)[1]

In Vitro

20S Proteasome activator 1 (compound 19) (2.5-15 μM; 45 min) degrades 73% α-synuclein at 10 μM, and over 80% at 15 μM[1].

20S Proteasome activator 1 (5-15 μM; 24 h) reduces 25% A53T mutant, and dose-dependently reduces enhancement of α-synuclein in Hek-293T cells (transiently transfected with an A53T mutant α-synuclein plasmid) at 5 μM; decreases 67% A53T α-synuclein at 15 μM[1].

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

REFERENCES

[1]. Staerz SD, et al. Design, Synthesis, and Biological Evaluation of Potent 20S Proteasome Activators for the Potential Treatment of α-Synucleinopathies. J Med Chem. 2022 May 12;65(9):6631-6642.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA