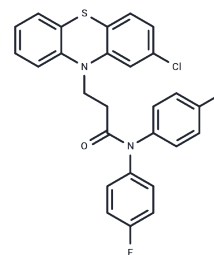


20S Proteasome activator 1

Chemical Properties

CAS No. :	2761578-18-9
Formula:	C27H19ClF2N2OS
Molecular Weight:	492.97
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	20S Proteasome activator 1 is a 20S proteasome activator with IC50 values of 0.3 μ M for trypsin-like sites, 0.7 μ M for chymotrypsin-like sites, and 1.8 μ M for caspase sites. It prevents the accumulation of pathogenic alpha-synuclein (A53T) mutants through translation in the cellular system, thereby reducing the probability of disease occurrence. 20S Proteasome activator 1 can be used to study neurodegenerative diseases.
Targets(IC50)	Proteasome
In vitro	At concentrations of 2.5-15 μ M and a treatment duration of 45 minutes, 20S Proteasome activator 1 (compound 19) degrades 73% of α -synuclein at 10 μ M and over 80% at 15 μ M.[1] At concentrations of 5-15 μ M and a 24-hour treatment period, 20S Proteasome activator 1 reduces A53T mutant α -synuclein by 25%. It also exhibits a dose-dependent reduction in the augmentation of α -synuclein in Hek-293T cells transiently transfected with an A53T mutant α -synuclein plasmid, achieving a 67% decrease at 15 μ M.[1]

Solubility Information

Solubility	DMSO: 250 mg/mL (507.13 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (20.29 mM),Suspension. 10% DMSO+90% Corn Oil: 2.5 mg/mL (5.07 mM),Sonication is recommended. 10% DMSO+90% Saline: < 10 mg/mL (20.29 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. <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	2.0285 mL	10.1426 mL	20.2852 mL
5 mM	0.4057 mL	2.0285 mL	4.057 mL
10 mM	0.2029 mL	1.0143 mL	2.0285 mL
50 mM	0.0406 mL	0.2029 mL	0.4057 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

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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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