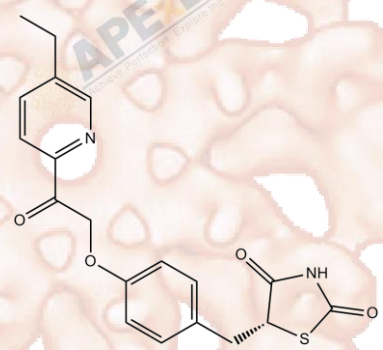
Product Data Sheet

MSDC-0160



Cat. No.:	B3702
CAS No.:	146062-49-9
Formula:	C19 H18 N2 O4 S
M.Wt:	370.42
Synonyms:	
Target:	Others
Pathway:	Others
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

⩾37 mg/mL in DMSO; insoluble in EtOH; insoluble in H2O

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.6996 mL	13.4982 mL	26.9964 mL
5 mM	0.5399 mL	2.6996 mL	5.3993 mL
10 mM	0.2700 mL	1.3498 mL	2.6996 mL

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

Biological Activity

Shortsummary	mTOT-modulating insulin sensitizer
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	LUHMES cells
Preparation method:	Limited solubility. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	10 or 100 μM, 1 hour

	Applications:	MSDC-0160 (10 μM) pretreatment (1 hour) prevented the MPP+ (10 μM)-induced loss of both tyrosine hydroxylase (TH)-immunoreactive differentiated Lund human mesencephalic (LUHMES) cells. MSDC-0160 protected TH-immunoreactive neurons. MSDC-0160 counteracted both MPP+-induced shortening of neurite length and reduced branching in both LUHMES cells. MSDC-0160 (10 or 100 μM) prevented the loss of GFP-fluorescent dopaminergic neurons induced by MPP+ (0.75 mM) in nematodes. MSDC-0160 (10 μM) blocked LPS-induced increases in iNOS expression in BV2 cell lysates.
In Vivo	**Animal experiment**	
	Animal models:	MPTP mouse model of Parkinson's disease (PD), En1+/- genetic mouse model of PD
	Dosage form:	Oral administration, 30 mg/kg per day
	Applications:	MSDC-0160 (30 mg/kg per day, p.o.) treatment for 3 days after MPTP injection improved motor behavior, protects nigrostriatal neurons, and suppressed disease progression in the MPTP mouse model of Parkinson's disease (PD). MSDC-0160 improved motor behavior in the open-field and rotarod tests and prevented dopaminergic neurodegeneration in the En1+/- genetic mouse model of PD. MSDC-0160 modulated mTOR signaling in C. elegans and the MPTP mouse model of PD. MSDC-0160 down-regulated mTOR signaling and restored autophagy in the En1+/- genetic mouse model of PD.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

[1]. Rohatgi N, Aly H, Marshall C A, et al. Novel insulin sensitizer modulates nutrient sensing pathways and maintains β-cell phenotype in human islets. PloS one, 2013, 8(5): e62012.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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