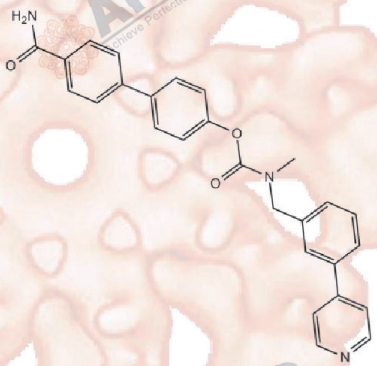
Product Data Sheet

WWL 70



Cat. No.:	A8891
CAS No.:	947669-91-2
Formula:	C27H23N3O3
M.Wt:	437.49
Synonyms:	
Target:	Others
Pathway:	Hydroxylases
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

insoluble in EtOH; insoluble in H2O; ⩾14.45 mg/mL in DMSO

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1mg	5mg	10mg
1 mM	2.2858 mL	11.4288 mL	22.8577 mL
5 mM	0.4572 mL	2.2858 mL	4.5715 mL
10 mM	0.2286 mL	1.1429 mL	2.2858 mL

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

Biological Activity

Shortsummary	α /β-hydrolase domain 6 inhibitor
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	HEK293 cells
Preparation method:	The solubility of this compound in DMSO is >10 mM. 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 μM, 10 min

	Applications:	Depolarization-induced suppression of excitation (DSE) is a major form of cannabinoid-mediated short-term retrograde neuronal plasticity and is found in numerous brain regions. ABHD6 is not present presynaptically in autaptic neurons and the ABHD6 inhibitor, WWL70, has no effect on the autaptic DSE time course.
In Vivo	**Animal experiment**	
	Animal models:	Male C57BL/6 mice, 25–30 g
	Dosage form:	WWL70 (5 mg/kg or 10 mg/kg) dissolved in 1% DMSO in physiologic saline was injected intraperitoneally 30 min after TBI, and then once a day for ≥ 7 days depending on the experimental design.
	Applications:	WWL70, a selective ABHD6 inhibitor, improved motor coordination and working memory performance. WWL70 treatment reduced lesion volume in the cortex and neurodegeneration in the dendate gyrus. It also suppressed the expression of inducible nitric oxide synthase and cyclooxygenase-2 and enhanced the expression of arginase-1 in the ipsilateral cortex at 3 and 7 days post-TBI, suggesting microglia/macrophages shifted from M1 to M2 phenotypes after treatment. The blood-brain barrier dysfunction at 3 and 7 days post-TBI was dramatically reduced. Furthermore, the beneficial effects of WWL70 involved up-regulation and activation of cannabinoid type 1 and type 2 receptors and were attributable to the phosphorylation of the extracellular signal regulated kinase and the serine/threonine protein kinase AKT.
	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. Straiker A1, Hu SS, Long JZ et al. Monoacylglycerol lipase limits the duration of endocannabinoid-mediated depolarization-induced suppression of excitation in autaptic hippocampal neurons. Mol Pharmacol. 2009 Dec;76(6):1220-7.

2. Tchantchou F1, Zhang Y. Selective inhibition of alpha/beta-hydrolase domain 6 attenuates neurodegeneration, alleviates blood brain barrier breakdown, and improves functional recovery in a mouse model of traumatic brain injury. J Neurotrauma. 2013 Apr 1;30(7):565-79.

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.

APExBIO Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com