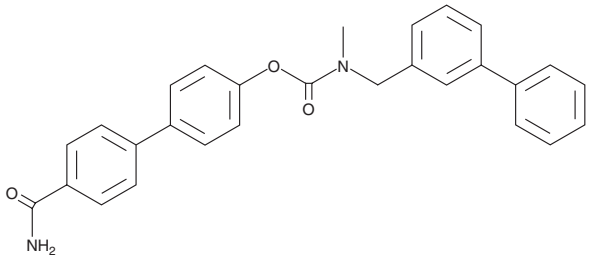
PRODUCT INFORMATION

WWL123

Item No. 16849

CAS Registry No.:	1338574-83-6
Formal Name:	N-([1,1′-biphenyl]-3-ylmethyl)-N-methyl-carbamic acid, 4′-(aminocarbonyl)[1,1′-biphenyl]-4-yl ester
MF:	$C_{28}H_{24}N_2O_3$
FW:	436.5
Purity:	≥95%
UV/Vis.:	λ_{max}: 265 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

WWL123 is supplied as a crystalline solid. A stock solution may be made by dissolving the WWL123 in the solvent of choice. WWL123 is soluble in the organic solvent DMSO, which should be purged with an inert gas, at a concentration of approximately 1 mg/ml.

WWL123 is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

The serine hydrolase known as α/β-hydrolase domain-containing protein 6 (ABHD6) hydrolyzes 2-arachidonoyl glycerol (Item No. 62160) to regulate its availability at cannabinoid receptors.[1] WWL123 is a brain-penetrant inhibitor of ABHD6 (IC_{50} = 0.43 µM) that demonstrates >10-fold selectivity for ABHD6 compared to a panel of ~35 other serine hydrolases.[2] Inhibition of ABHD6 by WWL123 has been used to decrease seizure incidence in a genetic mouse model of juvenile Huntington's disease as well as in chemically-induced epilepsy models.[3]

References

1. Blankman, J.L., Simon, G.M., and Cravatt, B.F. A comprehensive profile of brain enzymes that hydrolyze the endocannabinoid 2-arachidonoylglycerol. *Chem. Biol.* **14**, 1347-1356 (2007).
2. Bachovchin, D.A., Ji, T., Simon, G.M., *et al*. Superfamily-wide portrait of serine hydrolase inhibition achieved by library-*versus*-library screening. *Proc. Natl. Acad. Sci. USA* **107(49)**, 20941-20946 (2010).
3. Naydenov, A.V., Horne, E.A., Cheah, C.S., *et al*. ABHD6 blockade exerts antiepileptic activity in PTZ-induced seizures and in spontaneous seizures in R6/2 mice. *Neuron* **83(2)**, 361-371 (2014).

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