PRODUCT INFORMATION



KT185

Item No. 19113

| CAS Registry No.: | 1472640-86-0 | | |
|-------------------|--|----|-------------------|
| Formal Name: | [4'-[1-[(2-phenyl-1-piperidinyl)carbonyl]- | ~ | |
| | 1H-1,2,3-triazol-4-yl][1,1'-biphenyl]-3-yl]- | | $\langle \rangle$ |
| | 1-piperidinyl-methanone | | N |
| MF: | $C_{32}H_{33}N_5O_2$ | | |
| FW: | 519.6 | O. | oطر |
| Purity: | ≥98% | | |
| UV/Vis.: | λ _{max} : 279 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

KT185 is supplied as a crystalline solid. A stock solution may be made by dissolving the KT185 in the solvent of choice, which should be purged with an inert gas. KT185 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of KT185 in these solvents is approximately 30 mg/ml.

Description

KT185 is an orally bioavailable inhibitor of α/β -hydrolase domain-containing protein 6 (ABHD6) with an IC₅₀ value of 0.21 nM in a competitive activity-based protein profiling assay using Neuro2A membranes.¹ It inhibits ABHD6 in a 2-arachidonoyl glycerol (2-AG; Item No. 62160) hydrolysis assay (IC₅₀ = 13.6 nM for the mouse recombinant enzyme expressed in HEK293T cells). KT185 is selective for ABHD6 over diacylglycerol lipase β (DAGL β) at 1 μ M but inhibits lysophospholipase 1 (LYPLA1) and LYPLA2 at 10 μ M. It inhibits ABHD6 activity in mouse liver and brain in vivo when administered at doses of 5-10 and approximately 40 mg/kg, respectively, without inhibiting fatty acid amide hydrolase (FAAH) in the brain. KT185 inhibits increases in the frequency of spontaneous inhibitory post-synaptic currents (sIPSCs) induced by nicotine (Item No. 29138) in the rat ventral tegmental area (VTA) but does not reduce nicotine self-administration in rats when administered intracerebroventricularly at a dose of 200 μ g.² It has been used as a negative control for the off-target effect of the DAGL inhibitor KT172 (Item No. 19112) on ABHD6.

References

- 1. Hsu, K.L., Tsuboi, K., Chang, J.W., et al. Discovery and optimization of piperidyl-1,2,3-triazole ureas as potent, selective, and in vivo-active inhibitors of α/β -hydrolase domain containing 6 (ABHD6). J. Med. Chem. 56(21), 8270-8279 (2013).
- 2. Buczynski, M.W., Herman, M.A., Hsu, K.L., et al. Diacylglycerol lipase disinhibits VTA dopamine neurons during chronic nicotine exposure. Proc. Natl. Acad. Sci. USA 113(4), 1086-1091 (2016).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

uyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 02/15/2024

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD ANN ARBOR, MI 48108 · USA PHONE: [800] 364-9897 [734] 971-3335 FAX: [734] 971-3640 CUSTSERV@CAYMANCHEM.COM WWW.CAYMANCHEM.COM