LP 12 hydrochloride hydrate

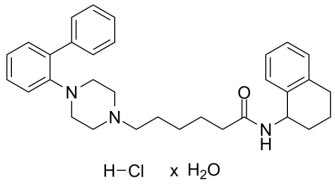
Cat. No.: HY-103105A

Molecular Formula: $C_{32}H_{39}N_3O.HCl.xH_2O$

Target: 5-HT Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	LP 12 hydrochloride hydrate is a potent and selective 5-HT7 receptor agonist with a K_i of 0.13 nM. LP 12 hydrochloride hydrate displays selectivity for 5-HT7 over D2, 5-HT1A and 5-HT2A receptors (K_i values are 224 nM, 60.9 nM and >1000 nM, respectively)[1][2].
In Vitro	LP 12 hydrochloride hydrate (0.13 nM; spermatozoa) increases the percentage of hyperactivated spermatozoa. LP 12 hydrochloride hydrate do not affect straight-line velocity (VSL), curvilinear velocity (VCL), average-path velocity (VAP), linearity (LIN), straightness (STR), wobbler coefficient (WOB), amplitude of lateral head displacement (ALH), and beat-cross frequency (BCF)[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Marcello Leopoldo, et al. Structure-activity relationship study on N-(1,2,3,4-tetrahydronaphthalen-1-yl)-4-aryl-1-piperazinehexanamides, a class of 5-HT7 receptor agents. J Med Chem. 2007 Aug 23;50(17):4214-21.

[2]. Sugiyama Y, et, al. Effects of 5-hydroxytryptamine on spermatozoal hyperactivation and in vitro fertilization in mice. J Reprod Dev. 2019 Dec 18;65(6):541-550.

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