MW-150 hydrochloride

Cat. No.: HY-120111A

CAS No.: 1923773-01-6

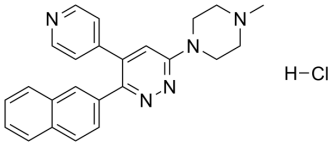
Molecular Formula: $C_{24}H_{24}ClN_5$

Molecular Weight: 417.93

Target: p38 MAPK; Autophagy

Pathway: MAPK/ERK Pathway; Autophagy

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



BIOLOGICAL ACTIVITY

Description	MW-150 hydrochloride (MW01-18-150SRM hydrochloride) is a selective, CNS penetrant, and orally active inhibitor of p38α MAPK with a K_i of 101 nM. MW-150 hydrochloride (MW01-18-150SRM hydrochloride) inhibits the ability of the endogenous p38α MAPK to phosphorylate an endogenous substrate MK2 in activated glia[1].
IC_{50} & Target	p38α 101 nM (Ki)
In Vitro	MW-150 hydrochloride (MW01-18-150SRM hydrochloride) inhibits in a concentration-dependent manner the ability of the endogenous p38αMAPK to phosphorylate an endogenous substrate MK2 in activated glia[1]. MW-150 hydrochloride (MW01-18-150SRM hydrochloride) blocks in a concentration-dependent manner the increased IL-1β production by activated glia. The IC_{50} values are 332 nM and 936 nM for MK2 and IL-1β, respectively[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	MW-150 hydrochloride (MW01-18-150SRM hydrochloride) (2.5 mg/kg; oral daily for 3–4 months) improves the APP/PS1 transgenic (Tg) mice performance in radial arm water maze (RAWM) and contextual fear conditioning tests[1]. MW-150 hydrochloride (MW01-18-150SRM hydrochloride) (2.5 mg/kg; given i.p.; daily for 14 days) treatment in $APP^{NLh/NLh}$ × $PS^{P264L/P264L}$ knock-in mouse (with no overexpression of the amyloid precursor protein) exhibits RAWM behavior indistinguishable from WT mice[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	APP/PS1 transgenic (Tg) mouse (overexpresses amyloid-beta) [1]
Dosage:	2.5 mg/kg
Administration:	Oral daily; 3-4 months (until cognitive impairment is present)
Result:	Improved the Tg mice performance in both cognitive tests.

REFERENCES

[1]. Roy SM, et al. Targeting human central nervous system protein kinases: An isoform selective p38αMAPK inhibitor that attenuates disease progression in Alzheimer's

disease mouse models. ACS Chem Neurosci. 2015 Apr 15;6(4):666-80.

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