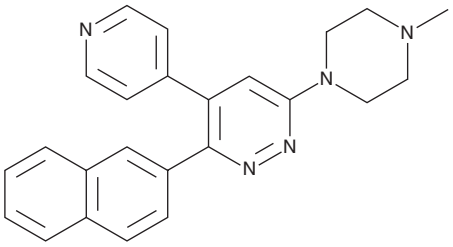
PRODUCT INFORMATION

MW-150

Item No. 33789

CAS Registry No.:	1628502-91-9
Formal Name:	6-(4-methyl-1-piperazinyl)-3-(2-naphthalenyl)-4-(4-pyridinyl)-pyridazine
Synonym:	MW01-18-150SRM
MF:	$C_{24}H_{23}N_5$
FW:	381.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 217, 232, 274 nm
Supplied as:	A 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

MW-150 is supplied as a solid. A stock solution may be made by dissolving the MW-150 in the solvent of choice, which should be purged with an inert gas. MW-150 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of MW-150 in ethanol and DMSO is approximately 1 mg/ml and approximately 15 mg/ml in DMF.

MW-150 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MW-150 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. MW-150 has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

MW-150 is an inhibitor of p38α MAPK (K_i = 101 nM).[1] It is 6-, 10-, and 14-fold selective for p38α MAPK over the serine/threonine protein kinase NLK, p38β MAPK, and p38δ MAPK, respectively, and is also selective over the enzymatically normal mutant p38α $MAPK^{T106M}$. It inhibits p38α MAPK phosphorylation of the endogenous substrate MAPK-activated protein kinase 2 (MK2) in LPS-activated glia in a concentration-dependent manner and decreases the levels of IL-1β in the same cells. MW-150 (2.5 mg/kg per day, i.p.) reduces the number of errors made in the spatial reference memory version of the radial arm water maze in aged amyloid precursor protein/presenilin 1 (APP/PS1) knock-in mice as a model of Alzheimer's disease.

Reference

1. Roy, S.M., Grum-Tokars, V.L., Schavocky, J.P., *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.* **6(4)**, 666-680 (2015).

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