

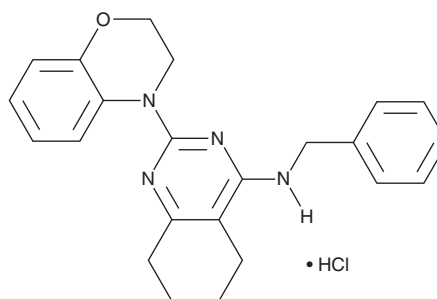
PRODUCT INFORMATION



ML-241 (hydrochloride)

Item No. 40400

CAS Registry No.: 2070015-13-1
Formal Name: 2-(2,3-dihydro-4H-1,4-benzoxazin-4-yl)-5,6,7,8-tetrahydro-N-(phenylmethyl)-4-quinazolinamine, monohydrochloride
MF: C₂₃H₂₄N₄O • HCl
FW: 408.9
Purity: ≥98%
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

ML-241 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the ML-241 (hydrochloride) in the solvent of choice. ML-241 (hydrochloride) is soluble in DMSO and slightly soluble in acetonitrile.

ML-241 (hydrochloride) 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

ML-241 is an ATP-competitive inhibitor of the ATPase p97 (IC₅₀ = 0.11 μM) that is selective for the D2 domain of p97.^{1,2} It disrupts the endoplasmic reticulum-associated degradation (ERAD) pathway, preventing the degradation of p97-dependent proteasome substrates in a reporter assay using HeLa cells (IC₅₀ = 3.5 μM) and inducing the accumulation of ubiquitin conjugates in the nuclear plus membrane and cytosolic compartments of SW403 colon cancer cells when used at concentrations of 5 and 10 μM.¹ Unlike the p97 inhibitor ML-240, ML-241 does not induce autophagy or apoptosis in, or inhibit the proliferation of, HCT15 and SW403 cancer cells.

References

1. Chou, T.F., Li, K., Frankowski, K.J., *et al.* Structure-activity relationship study reveals ML240 and ML241 as potent and selective inhibitors of p97 ATPase. *ChemMedChem* **8**(2), 297-312 (2013).
2. Chou, T.F., Bulfer, S.L., Weihl, C.C., *et al.* Specific inhibition of p97/VCP ATPase and kinetic analysis demonstrate interaction between D1 and D2 ATPase domains. *J. Mol. Biol.* **426**(15), 2886-2899 (2014).

WARNING

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

SAFETY 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

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