

PRODUCT INFORMATION



OTSSP167 (hydrochloride)

Item No. 16873

CAS Registry No.: 1431698-10-0
Formal Name: 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(((1*r*,4*r*)-4-((dimethylamino)methyl)cyclohexyl)amino)-1,5-naphthyridin-3-yl)ethan-1-one, monohydrochloride

MF: C₂₅H₂₈Cl₂N₄O₂ • HCl

FW: 523.9

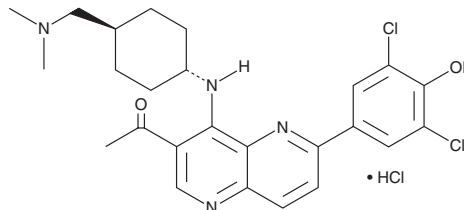
Purity: ≥95%

UV/Vis.: λ_{max}: 220, 305 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

OTSSP167 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the OTSSP167 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. OTSSP167 (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of OTSSP167 (hydrochloride) in these solvents is approximately 1, 30, and 10 mg/ml, respectively.

OTSSP167 (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, OTSSP167 (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. OTSSP167 (hydrochloride) has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Maternal embryonic leucine zipper kinase (MELK) is a serine/threonine kinase that regulates signaling central to cell cycling, stem cell renewal, apoptosis, and other cellular processes.¹ MELK is overexpressed in some forms of cancer, particularly those with aggressive undifferentiated tumors.²⁻⁴ OTSSP167 is a potent inhibitor of MELK (IC₅₀ = 0.41 nM).⁵ It suppresses the growth of diverse cancer cell lines at low nanomolar concentrations.⁵ It also blocks the phosphorylation of MELK-specific substrates and reduces the ability of MCF-7 breast cancer cells to invade and form spheroids in Matrigel.⁵ OTSSP167 is also effective *in vivo* when delivered either orally or intravenously, suppressing the growth of xenograft tumors in mice.^{5,6}

References

1. Jiang, P. and Zhang, D. *Int. J. Mol. Sci.* **14**(11), 21551-21560 (2013).
2. Gray, D., Jubb, A.M., Hogue, D., *et al. Cancer Res.* **65**(21), 9751-9761 (2005).
3. Joshi, K., Banasavadi-Siddegowda, Y., Mo, X., *et al. Stem Cells* **31**(6), 1051-1063 (2013).
4. Nakano, I., Joshi, K., Visnyei, K., *et al. Neuro. Oncol.* **13**(6), 622-634 (2011).
5. Chung, S., Suzuki, H., Miyamoto, T., *et al. Oncotarget* **3**(12), 1629-1640 (2012).
6. Chung, S. and Nakamura, Y. *Cell Cycle* **12**(11), 1655-1656 (2013).

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.

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