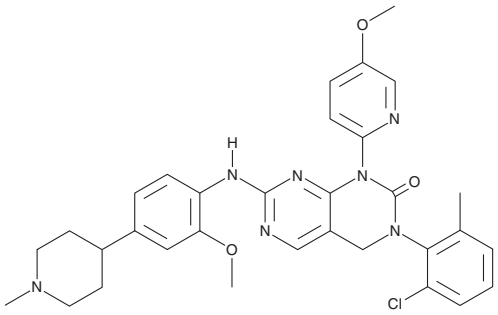
# PRODUCT INFORMATION

## YKL-05-099

*Item No. 36116*



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|---|---|
| **CAS Registry No.:** | 1936529-65-5 |
| **Formal Name:** | 3-(2-chloro-6-methylphenyl)-3,4-dihydro-7-[[2-methoxy-4-(1-methyl-4-piperidinyl) phenyl]amino]-1-(5-methoxy-2-pyridinyl)-pyrimido[4,5-d]pyrimidin-2(1H)-one |
| **MF:** | $C_{32}H_{34}ClN_7O_3$ |
| **FW:** | 600.1 |
| **Purity:** | ≥98% |
| **UV/Vis.:** | $\lambda_{max}$: 276, 302 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

YKL-05-099 is supplied as a solid. A stock solution may be made by dissolving the YKL-05-099 in the solvent of choice, which should be purged with an inert gas. YKL-05-099 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of YKL-05-099 in DMF is approximately 5 mg/ml and approximately 10 mg/ml in ethanol and DMSO.

### Description

YKL-05-099 is an inhibitor of salt-inducible kinase 2 (SIK2; $IC_{50}$ = 0.04 µM for the human enzyme).[1] It is selective for SIK2 over a panel of 141 kinases at 1 µM but also inhibits 14 other kinases, including SIK3, Ephrin receptors, and Src. YKL-05-099 increases IL-10 production in zymosan A-induced isolated mouse bone marrow-derived dendritic cells (BMDCs; $EC_{50}$ = 0.46 µM), as well as decreases TNF-α, IL-6, and IL-12p40 levels and increases IL-1β levels in LPS-stimulated BMDCs when used at a concentration of 1 µM. It inhibits the proliferation of MOLM-13 leukemia cells ($IC_{50}$ = 0.24 µM).[2] *In vivo*, YKL-05-099 (10 µmol/kg) increases the bone formation rate and number of femoral osteoblasts and decreases the number of femoral osteoclasts in mice.[3]

### References


1. Sundberg, T.B., Liang, Y., Wu, H., *et al*. Development of chemical probes for investigation of salt-inducible kinase function *in vivo*. *ACS Chem. Biol.* **11(8)**, 2105-2111 (2016).
2. Tarumoto, Y., Lin, S., Wang, J., *et al*. Salt-inducible kinase inhibition suppresses acute myeloid leukemia progression in vivo. *Blood* **135(1)**, 56-70 (2020).
3. Wein, M.N., Liang, Y., Goransson, O., *et al*. SIKs control osteocyte responses to parathyroid hormone. *Nat. Commun.* **7**, 13176 (2016).





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