

PRODUCT INFORMATION



T3-CLK

Item No. 41309

CAS Registry No.: 2109805-56-1

Formal Name: 4-[1,1-dimethyl-2-(4-methyl-1-piperazinyl)-2-oxoethyl]-N-[6-(4-pyridinyl)imidazo[1,2-a]pyridin-2-yl]-benzamide

Synonyms: CDC-like Kinase Inhibitor T3, CDC-like Kinase-IN-T3, CLK-IN-T3, T3-CDC-like Kinase

MF: $C_{28}H_{30}N_6O_2$

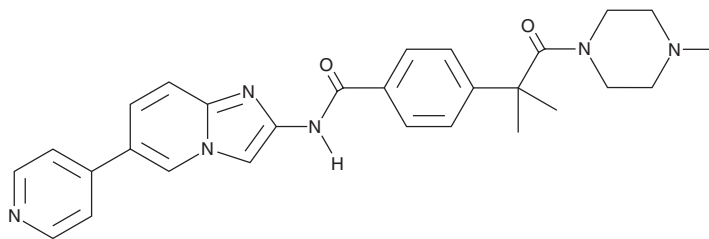
FW: 482.6

Purity: $\geq 98\%$

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

T3-CLK is supplied as a solid. A stock solution may be made by dissolving the T3-CLK in the solvent of choice, which should be purged with an inert gas. T3-CLK is soluble (≥ 10 mg/ml) in DMSO and slightly soluble (0.1-1 mg/ml) in ethanol.

Description

T3-CLK is a pan inhibitor of CDC-like kinases (Clks; IC_{50} s = 0.67, 15, and 110 nM for Clk1, Clk2, and Clk3, respectively).¹ It is selective for Clk1-3 over dual-specificity tyrosine phosphorylation-regulated kinase 1A (DYRK1A) and DYRK1B (IC_{50} s = 260 and 230 nM, respectively), as well as 62 kinases in a panel at 1,000 nM and four kinases in the same panel at 1,110 nM. T3-CLK modulates Clk-responsive alternative splicing events and reduces exon recognition, as well as increases levels of conjoined gene transcripts, in HCT116 colorectal cancer cells and 184-hTERT mammary epithelial cells. It reduces the expression of VEGFR2 in human umbilical vein endothelial cells (HUVECs) when used at concentrations ranging from 300 to 1,000 nM.² T3-CLK also inhibits VEGF-induced-sprouting in HUVEC spheroids when used at concentrations of 300 and 1,000 nM and inhibits HUVEC migration at 500, 800, and 1,000 nM.

References

1. Funnell, T., Tasaki, S., Oloumi, A., *et al.* CLK-dependent exon recognition and conjoined gene formation revealed with a novel small molecule inhibitor. *Nat. Commun.* **8**(1), 7 (2017).
2. Zech, T.J., Wolf, A., Hector, M., *et al.* 2-Desaza-annomontine (C81) impedes angiogenesis through reduced VEGFR2 expression derived from inhibition of CDC2-like kinases. *Angiogenesis* **27**(2), 245-272 (2024).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM