

Product Data Sheet

Product Name: dCDK9-202

Cat. No.: GC81512

Chemical Properties

Cas. No.

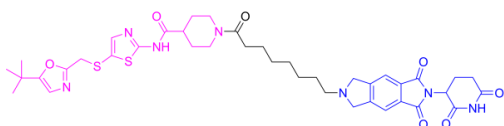
Formula $C_{40}H_{49}N_7O_7S_2$ M.Wt 803.99

Solubility DMSO: 100 mg/mL (124.38 mM; Storage Store at -20°C
Need ultrasonic)

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Caution: Product has not been fully validated for medical applications. For research use only.

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Background

dCDK9-202 is a CDK9 PROTAC degrader with a DC_{50} of 3.5 nM. dCDK9-202 induces CDK9 degradation via the ubiquitin-proteasome system. dCDK9-202 inhibits the growth of cancer cells in vitro and suppresses tumor growth in mouse xenograft models. dCDK9-202 is applicable for cancer-related research [1]. (Pink: CDK9 ligand; Blue: Cereblon ligand; Black: linker).

In Vivo, dCDK9-202 (compound 14) (10 mg/kg; i.v.; every other day for 7 doses; single dose) potently inhibits TC-71 Ewing sarcoma xenograft growth and reduces intratumoral CDK9 protein levels, without causing detectable toxicity[1].

In Vitro, dCDK9-202 (compound 14) (0.25-25 nM; 2-24 h) potently and selectively degrades CDK9 in TC-71 Ewing sarcoma cells via a proteasome-dependent CRBN-mediated mechanism, with a DC_{50} of 3.5 nM, and achieves nearly complete degradation within 8 h at a concentration of 10 nM[1]. dCDK9-202 (0.25-25 nM; 6 h) potently degrades CDK9 in U87 glioblastoma cells, SKUT1 uterine leiomyosarcoma cells and RH5 rhabdomyosarcoma cells, with a DC_{50} value of less than 10 nM[1]. dCDK9-202 (72 h) potently inhibits the growth of various human cancer cell lines derived from different tissues, with IC_{50} values ranging from 2.4 nM (RH5 rhabdomyosarcoma) to 174.2 nM (SJSA-1 osteosarcoma)[1]. dCDK9-202 (10 nM; 0-24 h) selectively degrades CDK9 in TC-71 Ewing sarcoma cells within 8 h, without inducing acute off-target degradation of IKZF1/3 or other CDK family members[1]. dCDK9-202 (0.25-25 nM; 6-8 h) impairs Pol2 activity and disrupts the oncogenic transcriptome in TC-71 Ewing sarcoma cells, reduces Pol2 phosphorylation levels, inhibits key oncoproteins and anti-apoptotic proteins, and suppresses pro-tumor signaling pathways[1]. dCDK9-202 (10-50 nM; 24 h) inhibits DNA replication and induces apoptosis in TC-71 Ewing sarcoma cells[1].

References:

[1]. Ma L, et al. Discovery of dCDK9-202 as a Highly Potent and Selective PROTAC CDK9 Degradator with Strong Antitumor Activity. Journal of medicinal chemistry. 2025 Oct 23;68(20):21172-21186.

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