Senexin A hydrochloride

Cat. No.: HY-15681A

CAS No.: 1780390-76-2

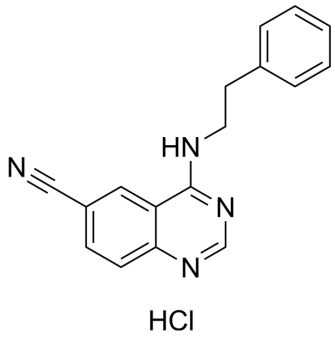
Molecular Formula: $C_{17}H_{15}ClN_4$

Molecular Weight: 310.78

Target: CDK

Pathway: Cell Cycle/DNA Damage

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Senexin A hydrochloride is an inhibitor of CDK8/19 (IC_{50}: 280 nM, CDK8) and an inhibitor downstream of p21 transcription. It only inhibits p21-induced transcription but does not inhibit other biological effects of p21. Senexin A hydrochloride inhibits CMV-GFP induction as well as the p21 stimulatory activity of the consensus NF-κB-dependent promoters[1][2].		
IC_{50} & Target	CDK8 280 nM (IC_{50})	CDK8 0.83 μM (Kd)	CDK19 0.31 μM (Kd)
In Vitro	Senexin A hydrochloride inhibits CDK8 and CDK19 ATP site binding with K_d50 of 0.83 μM and 0.31 μM, respectively[1]. Senexin A hydrochloride inhibits β-catenin-dependent transcription in HCT116 colon cancer cells[1]. In HT1080 cells, Senexin A hydrochloride strongly inhibits the induction of the transcription factor EGR1 upon serum starvation[1]. Senexin A hydrochloride also reduces the expression of many secreted tumor-promoting factors in doxorubicin-treated wild-type HCT116 cells[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.		
In Vivo	Senexin A hydrochloride (5 times daily) completely reverses the tumor-promoting effects of chemotherapy. Senexin A hydrochloride had no significant toxicity to body weight, organ weights, or blood cell counts in C57BL/6 mice during treatment. Senexin A hydrochloride treatment significantly improves A549/MEF tumor response to Doxorubicin (HY-15142A) [1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.		

CUSTOMER VALIDATION

- Nucleic Acids Res. 2021 Feb 22;49(3):1470-1484.
- Cell Death Dis. 2020 Sep 15;11(9):754.
- Viruses. 2020 Jun 17;12(6):654.
- J Cell Biochem. 2019 Aug;120(8):14095-14106.
- FEBS Lett. 2021 May 31.

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REFERENCES

[1]. Porter DC, et al. Cyclin-dependent kinase 8 mediates chemotherapy-induced tumor-promoting paracrine activities. Proc Natl Acad Sci U S A. 2012 Aug 21;109(34):13799-804.

[2]. Ho TY, et al. The study of a novel CDK8 inhibitor E966-0530-45418 that inhibits prostate cancer metastasis in vitro and in vivo. Biomed Pharmacother. 2023 Jun;162:114667.

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