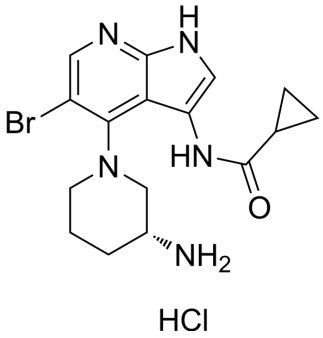
GDC0575 hydrochloride

Cat. No.:	HY-112167B
CAS No.:	1196504-54-7
Molecular Formula:	$C_{16}H_{21}BrClN_5O$
Molecular Weight:	414.73
Target:	Checkpoint Kinase (Chk)
Pathway:	Cell Cycle/DNA Damage
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	GDC0575 (ARRY-575) hydrochloride is a highly-selective and orally active Chk1 (IC_{50}=1.2 nM) inhibitor. GDC0575 (ARRY-575) hydrochloride can be used for colitis-associated cancer (CAC) and colitis research[1].
IC_{50} & Target	Chk1 1.2 nM (IC_{50})
In Vitro	GDC-0575 dihydrochloride is a selective and orally bioavailable CHK1 inhibitor, with an IC_{50} of 1.2 nM. GDC-0575 (100 nM) suppressses CHK1 activation induced by AraC by decreasing the level of Tyr15-phosphorylated CDK2[1]. GDC-0575 dihydrochloride (100 nM) has no effect on the viability of AML cells, but significantly reduces cell viability and induces apoptosis in combination with AraC. GDC-0575 plus AraC shows no effect on normal hematopoietic stem and progenitor cells (HSPCs)[1]. GDC-0575 shows cytotoxic activity against most of 20 melanoma cell lines tested, but several cell lines grown as tumour sphere (TS) are relatively insensitive[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	GDC-0575 dihydrochloride (7.5 mg/kg, p.o.) in combination with AraC alomost completely eradicates leukemic burden in mice transplanted with U937-Luc cells, and shows more efficient activity than AraC alone. GDC-0575 dihydrochloride elevates the cytotoxicity of AraC in different primary AML models in vivo[1]. GDC-0575 dihydrochloride (25, 50 mg/kg, p.o.) dose-dependently inhibits the growth of tumor in D20 and C002 xenografts[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Nat Commun. 2020 Jan 8;11(1):123.
- Neurotherapeutics. 2022 Mar;19(2):570-591.
- Mol Cancer Res. 2020 Jan;18(1):91-104.
- bioRxiv. 2023 Feb 7.

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REFERENCES

[1]. Oo ZY, et al. Endogenous Replication Stress Marks Melanomas Sensitive to CHEK1 Inhibitors In Vivo. Clin Cancer Res. 2018 Mar 13.

[2]. Laroche-Clary A, et al. CHK1 inhibition in soft-tissue sarcomas: biological and clinical implications. Ann Oncol. 2018 Apr 1;29(4):1023-1029.

[3]. Di Tullio A, et al. The combination of CHK1 inhibitor with G-CSF overrides cytarabine resistance in human acute myeloid leukemia. Nat Commun. 2017 Nov 22;8(1):1679.

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