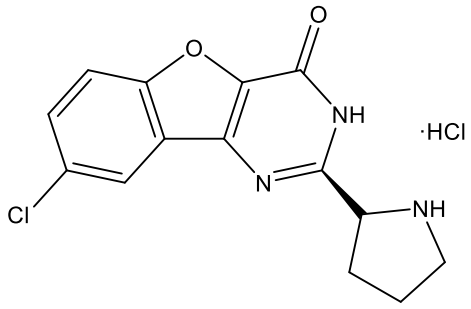
Catalog #10-4414

XL413·HCl

CAS# 2062200-97-7

8-Chloro-2-[(2S)-pyrrolidin-2-yl]-3H-[1]benzofuro[3,2-d]pyrimidin-4-one hydrochloride

Lot # FBA94035



XL413 is a potent (IC_{50} = 4.8 nM) ATP-competitive inhibitor of the important DNA replication initiation kinase Cdc7 (DDK).[1] It increases the efficiency of homology directed DNA repair in CRISPR-Cas9 gene editing.[2] XL413 acted synergistically with other chemotherapy agents in various cancer models.[3-5]

1) Koltun *et al.* (2012), *Discovery of XL413, a potent and selective CDC7 inhibitor*; Bioorg .Med. Chem. Lett. **22** 3727
2) Wienert *et al.* (2020), *Timed inhibition of CDC7 increases CRISPR-Cas9 mediated templated repair*; Nat. Commun. **11**2109
3) Deng *et al.* (2023), *Identifying CDC7 as a synergistic target of chemotherapy in resistant small-cell lung cancer via CRISPR/Cas9 screening*; Cell Death Discov. **9** 40
4) Zhang *et al.* (2023), *DBF4 Dependent Kinase Inhibition Suppresses Hepatocellular Carcinoma Progression and Potentiates Anti-Programmed Cell Death-1 Therapy*; Int. J. Biol. Sci. **19** 3427
5) Li *et al.* (2024), *Effective sequential combined therapy with carboplatin and a CDC7 inhibitor in ovarian cancer*; Nat. Commun. **39** 10185

PHYSICAL DATA

Molecular Weight:	326.18
Molecular Formula:	$C_{14}H_{12}N_3O_2$·HCl
Purity:	>98% (HPLC)
	NMR: (Conforms)
Solubility:	DMSO (2 mg/mL with warming); water (7 mg/ml with warming)
Physical Description:	White solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO or water may be stored at -20°C for up to 3 months.

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