

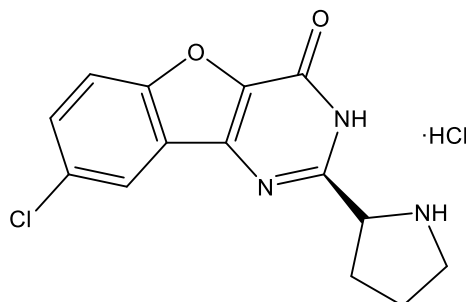
**Catalog #10-4414**

**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).<sup>1</sup> It increases the efficiency of homology directed DNA repair in CRISPR-Cas9 gene editing.<sup>2</sup> XL413 acted synergistically with other chemotherapy agents in various cancer models.<sup>3-5</sup>

- 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 <sub>14</sub> H <sub>12</sub> ClN <sub>3</sub> O <sub>2</sub> ·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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