Small Molecules

XL413

Inhibits cell division cycle 7 (CDC7) kinase

Catalog #100-0542 5 mg
100-0543 10 mg

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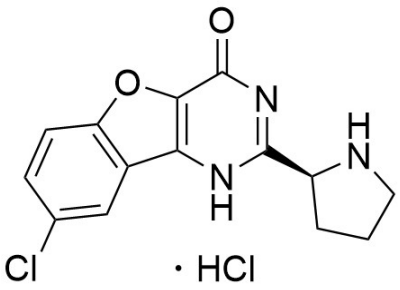
Product Description

XL413 selectively inhibits the cell division cycle 7 (CDC7) kinase (IC_{50} = 3.4 nM), which is involved in the initiation and maintenance of DNA replication (Koltun et al.). XL413 displays selectivity for CDC7 kinase over a panel of 100 kinases (Sasi et al.). This product is supplied as the hydrochloride salt of the molecule.

Molecular Name:	XL413 (Hydrochloride)
Alternative Names:	Not applicable
CAS Number:	2062200-97-7
Chemical Formula:	$C_{14}H_{12}ClN_3O_2$ • HCl
Molecular Weight:	326.2 g/mol
Purity:	≥ 98%
Chemical Name:	8-chloro-2-(2S)-2-pyrrolidinyl-benzofuro[3,2-d]pyrimidin-4(3H)-one, monohydrochloride
Structure:	



Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect product from prolonged exposure to light. For long-term storage, store with a desiccant. Stable as supplied for 12 months from date of receipt.
Solubility:	• PBS (pH 7.2) ≤ 30 mM • DMSO ≤ 613 µM For example, to prepare a 10 mM stock solution in PBS, resuspend 1 mg in 307 µL of PBS. Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

Published Applications

CANCER RESEARCH
· Induces apoptosis and inhibits the proliferation of human colon adenocarcinoma cells in vitro (Koltun et al.).
· Attenuates tumor growth in mice (Koltun et al.).

References

Koltun ES et al. (2012) Discovery of XL413, a potent and selective CDC7 inhibitor. Bioorg Med Chem Lett 22(11): 3727–31.

Sasi NK et al. (2014) The potent Cdc7-Dbf4 (DDK) kinase inhibitor XL413 has limited activity in many cancer cell lines and discovery of potential new DDK inhibitor scaffolds. PLoS One 9(11): e113300.

Related Small Molecules

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