Small	XL413	
Molecules	Inhibits cell division cycle 7 (CDC7) kinase	Scientists Helping Scientists™   www.stemcell.com
Catalog #100-0542 100-0543	5 mg 10 mg	TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713 INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

### **Product Description**

XL413 selectively inhibits the cell division cycle 7 (CDC7) kinase ( $IC_{50} = 3.4 \text{ nM}$ ), 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 <sub>14</sub> H <sub>12</sub> CIN <sub>3</sub> O <sub>2</sub> • HCI	
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:		
	0	



# Properties

Physical Appearance: Storage:

Solubility:

#### A crystalline solid

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.

• 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  $\mu$ L 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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