

1-(3-chlorophenyl)-3-(5-(2-(thieno[3,2-d]pyrimidin-4-ylamino)ethyl)thiazol-2-yl)urea

**CAS Registry No.:** 1057249-41-8

**Smiles String:**

c1cc(cc(c1)Cl)NC(=O)Nc2ncc(s2)CCNc3c4c(ccs4)ncn3

**Molecular Weight:** 430.93

**Molecular Formula:** C<sub>18</sub>H<sub>15</sub>ClN<sub>6</sub>OS<sub>2</sub>

**Lot Number:** Refer to vial

**<sup>1</sup>H-NMR:** Available on request

**HPLC (Purity):** > 95.0% @ 254 nm

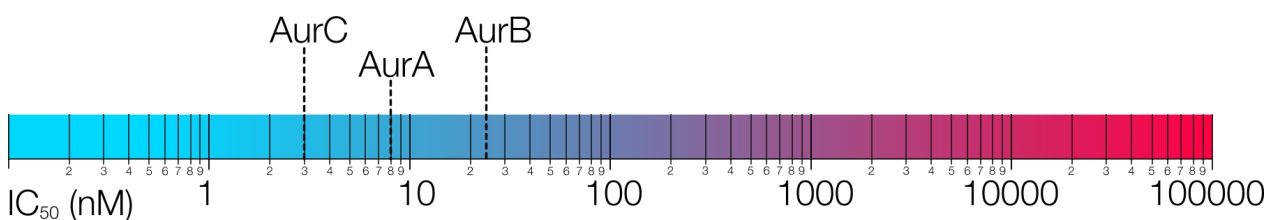
**ES-MS:** Available on request

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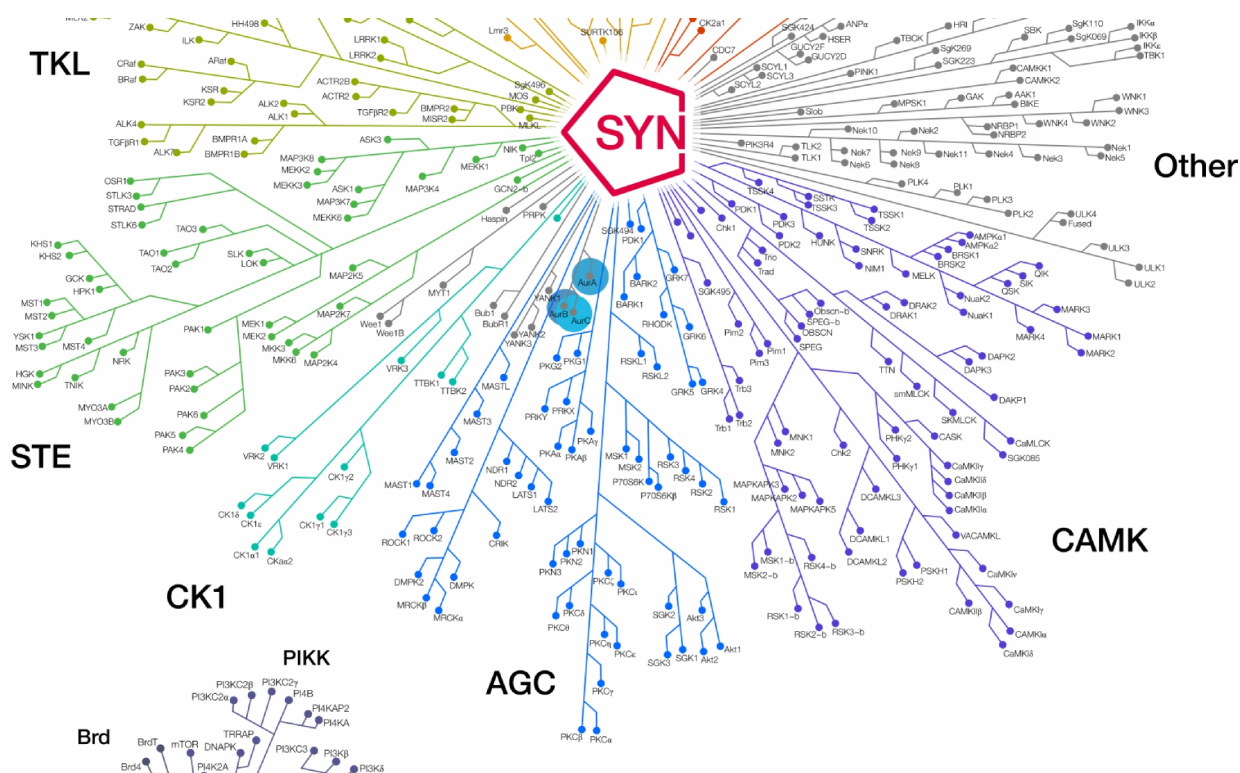
## Description:

Aurora kinases constitute a family of serine-threonine kinases that are strongly associated with cancer. Aurora A and B are essential in mitosis. Perturbation of their activity leads to multiple defects in mitosis including aberrant centrosome duplication, misalignment of chromosomes, inhibition of cytokinesis, and disruption of the spindle checkpoint. The role of Aurora C is unclear; however, Aurora C can complement Aurora B kinase activity in mitosis. SNS-314 is an ATP-competitive, selective, and potent nanomolar inhibitor of Aurora kinases *in vitro*. A cocrystal structure of SNS-314 with Aurora A confirms that SNS-314 engages the purine-binding pocket of Aurora. SNS-314 inhibits cellular proliferation in the HCT116 colorectal carcinoma cell line with an EC<sub>50</sub> of ~5 nM. Analysis of DNA content and indirect immunofluorescence demonstrates that SNS-314 induces defects in cytokinesis and spindle checkpoint that are consistent with Aurora kinase inhibition. Phosphorylation of Histone H3 on serine 10, a known Aurora B cellular target, is inhibited with an EC<sub>50</sub> of ~9 nM following treatment of cells with SNS-314. Administration of SNS-314 to HCT116 tumor bearing mice potently suppresses tumor growth. Analysis of SNS-314 treated tumors confirms that the anti-tumor activity is consistent with Aurora kinase inhibition. SNS-314 is a potent small-molecule inhibitor of Aurora kinase that is being developed as a novel anti-cancer therapeutic agent.

## Biological Activity



## Kinome Mapping



## Shipping and Storage Temperature

### Shipping:

Ambient

### Storage:

2 years -20C, Powder 1 month, -4C in DMSO, More than one month -80C in DMSO

## Solubility

DMSO 105mg/mL, Ethanol 1mg/mL

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## Preparing Stock Solutions

Stock Solution (1ml DMSO)	1mM	10mM	20mM	50mM
Mass(mg)	0.4309	4.3093	8.6186	21.5465

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## References

1. VanderPorten EC, Taverna P, Hogan JN, Ballinger MD, Flanagan WM, Fucini RV. The Aurora kinase inhibitor SNS-314 shows broad therapeutic potential with chemotherapeutics and synergy with microtubule-targeted agents in a colon carcinoma model. *Mol Cancer Ther.* 2009 Apr;8(4):930-9. doi: 10.1158/1535-7163.MCT-08-0754.

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## Ordering Information

To order more of this or any other SYNkinase compound, go to [synkinase.com](http://synkinase.com), Call us Toll Free (US Only) at 1- 877-854-6273 or email [orders@synkinase.com](mailto:orders@synkinase.com).

Product Datasheet (Rev. 1.1)