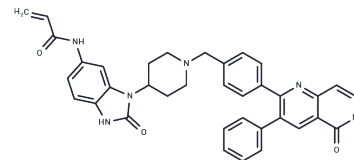


## Borussertib

### Chemical Properties

|                   |                                                               |
|-------------------|---------------------------------------------------------------|
| CAS No. :         | 1800070-77-2                                                  |
| Formula:          | C <sub>36</sub> H <sub>32</sub> N <sub>6</sub> O <sub>3</sub> |
| Molecular Weight: | 596.68                                                        |
| Appearance:       | no data available                                             |
| Storage:          | Powder: -20°C for 3 years   In solvent: -80°C for 1 year      |



### Biological Description

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description                 | Borussertib is a covalent-allosteric and first-in-class inhibitor of protein kinase Akt (IC <sub>50</sub> of 0.8 nM and a K <sub>i</sub> of 2.2 nM for Aktwt)                                                                                                                                                                                                                                                                        |
| Targets (IC <sub>50</sub> ) | Akt                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| In vitro                    | Borussertib exhibits excellent cellular activity in the nanomolar range with superior profile against clinical candidate Akt inhibitors as well as the cytostatic drug doxorubicin. With the EC <sub>50</sub> values are 191±90 nM, 48±15 nM, 5±1 nM, 277±90 nM, 373±54 nM, 7770±641 nM in AN3CA (endometrium), T47D (breast), ZR-75-1 (breast), MCF-7 (breast), BT-474 (breast) and KU-19-19 (bladder) cell lines, respectively[1]. |

### Solubility Information

|            |                                                                                                                             |
|------------|-----------------------------------------------------------------------------------------------------------------------------|
| Solubility | DMSO: 25 mg/mL (41.90 mM), Sonication is recommended.<br>( $< 1$ mg/mL refers to the product slightly soluble or insoluble) |
|------------|-----------------------------------------------------------------------------------------------------------------------------|

### Preparing Stock Solutions

|       | 1mg       | 5mg       | 10mg       |
|-------|-----------|-----------|------------|
| 1 mM  | 1.6759 mL | 8.3797 mL | 16.7594 mL |
| 5 mM  | 0.3352 mL | 1.6759 mL | 3.3519 mL  |
| 10 mM | 0.1676 mL | 0.838 mL  | 1.6759 mL  |
| 50 mM | 0.0335 mL | 0.1676 mL | 0.3352 mL  |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

### Reference

Niklas Uhlenbrock, et al. Structural and chemical insights into the covalentallosteric inhibition of the protein kinase Akt. Chem Sci., 2019, 10, 3573.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

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