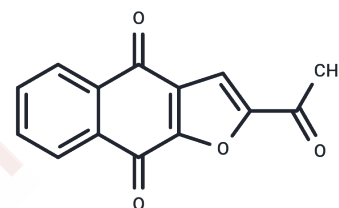


## Napabucasin

## Chemical Properties

CAS No. : 83280-65-3  
 Formula: C<sub>14</sub>H<sub>8</sub>O<sub>4</sub>  
 Molecular Weight: 240.21  
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year  
 Actual storage temperature shall be subject to the COA.



## Biological Description

|               |  |
|---------------|--|
| Description   | Napabucasin (BBI608) is an orally available Stat3 and Y cell stemness inhibitor.   |
| Targets(IC50) | STAT   |
| In vitro      | Napabucasin downregulates stemness gene expression driven by Stat3 and cancer stemness properties, and effectively inhibits self-renewal of stemness-high cancer cells with IC50 ranged from 0.291~1.19 μM, on inhibition on normal stem cells. [1]  |
| In vivo       | In mice bearing PaCa-2 xenografts, Napabucasin (20 mg/kg, i.p.) significantly inhibits tumor growth, relapse and metastasis. [1]   |
| Cell Research | For cancer stem cells, spheres are dissociated and plated under cancer stem cell culture conditions on coated 96-well plates. After 72 h of culture, wells are dosed with the indicated compounds. Seventy-two hours or 24 h after dosing, CellTiter-Glo 2.0 is added to each well, and the luminescence is measured as described by the manufacturer. IC50 values are calculated by fitting a four parameter dose-response curve to normalized data using GraphPad Prism software. For bulk cells, cells are plated at 5,000 cells per well on 96-well plates. Twenty-four hours after plating, cells are treated with the indicated compounds. Viability is determined at 72 h as described above.(Only for Reference) |

## Solubility Information

|            |  |
|------------|--|
| Solubility | H <sub>2</sub> O: < 1 mg/mL (insoluble or slightly soluble),<br>DMSO: 6.88 mg/mL (28.64 mM),Sonication is recommended.<br>acetonitrile: 0.8 mg/mL (3.33 mM),Sonication is recommended.<br>Ethanol: < 1 mg/mL (insoluble or slightly soluble),<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|--|

### Preparing Stock Solutions

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|       | 1mg       | 5mg        | 10mg       |
|-------|-----------|------------|------------|
| 1 mM  | 4.163 mL  | 20.8151 mL | 41.6302 mL |
| 5 mM  | 0.8326 mL | 4.163 mL   | 8.326 mL   |
| 10 mM | 0.4163 mL | 2.0815 mL  | 4.163 mL   |
| 50 mM | 0.0833 mL | 0.4163 mL  | 0.8326 mL  |

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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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Li Y, et al. Proc Natl Acad Sci U S A. 2015, 112(6), 1839-1844.

Xu S, Pan X, Mao L, et al. Phospho-Tyr705 of STAT3 is a therapeutic target for sepsis through regulating inflammation and coagulation. Cell Communication and Signaling. 2020, 18(1): 1-13.

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