

Store at  
-20C  
#16483**Ibrutinib**

10 mg



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**For Research Use Only. Not for Use in Diagnostic Procedures.**

|                              |   |
|------------------------------|---|
| <b>Background</b>            | Ibrutinib, also known as PCI-32765, is a small molecule inhibitor of Bruton's tyrosine kinase (Btk) (1,2). Research studies demonstrate that ibrutinib inhibits autophosphorylation of Btk as well as downstream targets such as PLC $\gamma$ 2 and ERK by binding to Cys481 in the active site (1,2). The inhibition of Btk also prevents NF $\kappa$ B DNA binding, reduces cell migration, proliferation and survival, inhibits DNA synthesis and induces apoptosis (1). |
| <b>Molecular Formula</b>     | C <sub>25</sub> H <sub>24</sub> N <sub>6</sub> O <sub>2</sub>   |
| <b>Molecular Weight</b>      | 440.5 g/mol   |
| <b>Purity</b>                | >99%  |
| <b>CAS</b>                   | 936563-96-1   |
| <b>Solubility</b>            | Soluble in DMSO at 200mg/ml and EtOH at 25mg/ml.  |
| <b>Storage</b>               | Store lyophilized or in solution at -20C, desiccated. Protect from light. In lyophilized form, the chemical is stable for 24 months. Once in solution, use within 3 months to prevent loss of potency. Aliquot to avoid multiple freeze/thaw cycles.  |
| <b>Directions for Use</b>    | Ibrutinib is supplied as a lyophilized powder. For a 20mM stock, reconstitute the 10 mg of powder in 1.14 ml DMSO. Working concentrations and length of treatment can vary depending on the desired effect, but it is typically used as a pretreatment at 1-10 $\mu$ M for 1 hour prior to treating with a stimulator.  |
| <b>Background References</b> | <ol style="list-style-type: none"> <li>1. Aalipour, A. and Advani, R.H. (2014) <i>Ther Adv Hematol</i> 5, 121-33.</li> <li>2. Chang, B.Y. et al. (2011) <i>Arthritis Res Ther</i> 13, R115.</li> </ol>  |

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