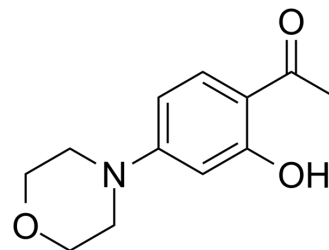


## IC 86621

<b>Cat. No.:</b>	HY-100707
<b>CAS No.:</b>	404009-40-1
<b>Molecular Formula:</b>	C <sub>12</sub> H <sub>15</sub> NO <sub>3</sub>
<b>Molecular Weight:</b>	221.25
<b>Target:</b>	DNA-PK; Apoptosis
<b>Pathway:</b>	Cell Cycle/DNA Damage; PI3K/Akt/mTOR; Apoptosis
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	IC 86621 is a potent DNA-dependent protein kinase (DNA-PK) inhibitor, with an IC <sub>50</sub> of 120 nM. IC 86621 also acts as a selective and reversible ATP-competitive inhibitor. IC 86621 inhibits DNA-PK mediated cellular DNA double-strand break (DSB) repair (EC <sub>50</sub> =68 μM). IC 86621 increases DSB-induced antitumor activity without cytotoxic effects. IC 86621 can protect rheumatoid arthritis (RA) T cells from apoptosis <sup>[1][2]</sup> .								
<b>IC<sub>50</sub> &amp; Target</b>	IC <sub>50</sub> : 120 nM (DNA-PK) <sup>[1]</sup>								
<b>In Vitro</b>	<p>IC 86621 exhibits high selectivity against other kinases such as PI3K, Cdk2, Src, PKA, PKC, Chk1, CK1, ATM, and FKBP12<sup>[1]</sup>. IC 86621 (0-100 nM, 24 h) protects RA (rheumatoid arthritis) T cells from apoptosis<sup>[2]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Apoptosis Analysis<sup>[2]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>CD4<sup>+</sup>CD45RO<sup>-</sup> T cells (from six control donors and seven RA patients)</td> </tr> <tr> <td>Concentration:</td> <td>0 nM, 50 nM, 100 nM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 h</td> </tr> <tr> <td>Result:</td> <td>Protected RA (rheumatoid arthritis) T cells from apoptosis.</td> </tr> </table>	Cell Line:	CD4 <sup>+</sup> CD45RO <sup>-</sup> T cells (from six control donors and seven RA patients)	Concentration:	0 nM, 50 nM, 100 nM	Incubation Time:	24 h	Result:	Protected RA (rheumatoid arthritis) T cells from apoptosis.
Cell Line:	CD4 <sup>+</sup> CD45RO <sup>-</sup> T cells (from six control donors and seven RA patients)								
Concentration:	0 nM, 50 nM, 100 nM								
Incubation Time:	24 h								
Result:	Protected RA (rheumatoid arthritis) T cells from apoptosis.								

### REFERENCES

- [1]. Chandra G, et al. Improved synthesis of a DNA-dependent protein kinase inhibitor IC86621. Arch Pharm Res. 2012 Mar;35(4):639-45.
- [2]. Shao L, et al. DNA-dependent protein kinase catalytic subunit mediates T-cell loss in rheumatoid arthritis. EMBO Mol Med. 2010 Oct;2(10):415-27.

---

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA