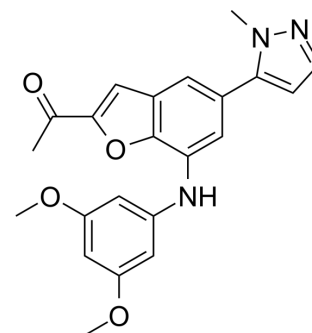


## STAT3-IN-9

Cat. No.:	HY-146666
CAS No.:	2987726-27-0
Molecular Formula:	C <sub>22</sub> H <sub>21</sub> N <sub>3</sub> O <sub>4</sub>
Molecular Weight:	391.42
Target:	Apoptosis; STAT
Pathway:	Apoptosis; JAK/STAT Signaling; Stem Cell/Wnt
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	STAT3-IN-9 is a potent STAT3 inhibitor. STAT3-IN-9 inhibits the activation of STAT3 (Tyr705) without influencing the phosphorylation of STAT1 (Tyr701). STAT3-IN-9 induces apoptosis and cell cycle arrest at the G2/M phase <sup>[1]</sup> .																
<b>IC<sub>50</sub> &amp; Target</b>	STAT3																
<b>In Vitro</b>	<p>STAT3-IN-9 (compound C6) (48 h) shows potent in vitro anti-tumor activity with IC<sub>50</sub>s of 0.16, 5.80, 1.63, 5.73, &gt;25, &gt;25 μM for MDA-MB-468, MDA-MB-231, HepG2, A549, U251, HCT116 cells, respectively<sup>[1]</sup>.</p> <p>STAT3-IN-9 (0, 0.2, 1.0, 5.0 μM; 24 h) inhibits the activation of STAT3 (Tyr705) without influencing the phosphorylation of STAT1 (Tyr701)<sup>[1]</sup>.</p> <p>STAT3-IN-9 (0, 0.2, 1 μM; 24 h) induces apoptosis through the mitochondrial Caspase dependent apoptotic pathway<sup>[1]</sup>.</p> <p>STAT3-IN-9 (0, 0.2, 1 μM; 24 h) induces cell cycle arrest at the G2/M phase in a dose-dependent manner<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Proliferation Assay<sup>[1]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>MDA-MB-468, MDA-MB-231, HepG2, A549, U251, HCT116 cells</td> </tr> <tr> <td>Concentration:</td> <td></td> </tr> <tr> <td>Incubation Time:</td> <td>48 h</td> </tr> <tr> <td>Result:</td> <td>Showed potent in vitro anti-tumor activity with IC<sub>50</sub>s of 0.16, 5.80, 1.63, 5.73, &gt;25, &gt;25 μM for MDA-MB-468, MDA-MB-231, HepG2, A549, U251, HCT116 cells, respectively.</td> </tr> </table> <p>Western Blot Analysis<sup>[1]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>MDA-MB-468 cells</td> </tr> <tr> <td>Concentration:</td> <td>0, 0.2, 1.0, 5.0 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 h</td> </tr> <tr> <td>Result:</td> <td>Inhibited the activation of STAT3 (Tyr705) without influencing the phosphorylation of STAT1 (Tyr701).</td> </tr> </table> <p>Apoptosis Analysis<sup>[1]</sup></p>	Cell Line:	MDA-MB-468, MDA-MB-231, HepG2, A549, U251, HCT116 cells	Concentration:		Incubation Time:	48 h	Result:	Showed potent in vitro anti-tumor activity with IC <sub>50</sub> s of 0.16, 5.80, 1.63, 5.73, >25, >25 μM for MDA-MB-468, MDA-MB-231, HepG2, A549, U251, HCT116 cells, respectively.	Cell Line:	MDA-MB-468 cells	Concentration:	0, 0.2, 1.0, 5.0 μM	Incubation Time:	24 h	Result:	Inhibited the activation of STAT3 (Tyr705) without influencing the phosphorylation of STAT1 (Tyr701).
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Incubation Time:	48 h																
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Incubation Time:	24 h																
Result:	Inhibited the activation of STAT3 (Tyr705) without influencing the phosphorylation of STAT1 (Tyr701).																

Cell Line:	MDA-MB-468 cells
Concentration:	0, 0.2, 1 $\mu$ M
Incubation Time:	24 h
Result:	Induced apoptosis through the mitochondrial Caspase dependent apoptotic pathway.
Cell Cycle Analysis <sup>[1]</sup>	
Cell Line:	MDA-MB-468 cells
Concentration:	0, 0.2, 1 $\mu$ M
Incubation Time:	24 h
Result:	Cells were arrest at the G2/M phase in a dose-dependent manner.

## REFERENCES

[1]. Wang F, et al. Identification of novel STAT3 inhibitors bearing 2-acetyl-7-phenylamino benzofuran scaffold for antitumour study. *Bioorg Med Chem.* 2020; 28(24):115822.

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

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