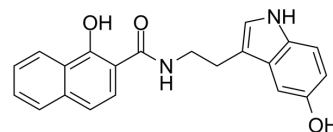


MS-1020

Cat. No.:	HY-123099
CAS No.:	1255516-86-9
Molecular Formula:	C ₂₁ H ₁₈ N ₂ O ₃
Molecular Weight:	346.38
Target:	JAK
Pathway:	Epigenetics; JAK/STAT Signaling; Stem Cell/Wnt
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	MS-1020 is a potent and ATP-competitive JAK3 inhibitor. MS-1020 inhibits JAK3/STAT signaling and induces apoptosis. MS-1020 promotes cell death. MS-1020 decreases the expression of tyrosine phosphorylated STAT3 levels. MS-1020 has the potential for the research of cancers harboring aberrant JAK3 signaling ^[1] .																
IC₅₀ & Target	JAK3																
In Vitro	<p>MS-1020 (0-50 μM; 24 h) inhibits STAT92E transcriptional activity in cultured Drosophila cells^[1].</p> <p>MS-1020 (0, 10, 30, 50 μM) decreases the expression of tyrosine phosphorylated STAT3 levels and shows no changes on total STAT3 levels^[1].</p> <p>MS-1020 (0, 10, 30, 50 μM; 16 h) decreases the expression of IL-2 (100 ng/ml)-induced STAT5 phosphorylation in Nb2 cells^[1].</p> <p>MS-1020 (0, 10, 30, 50 μM; 72 h) promotes cell death in a time- and dose-dependent manner in L540 cells^[1].</p> <p>MS-1020 (0, 10, 30, 50 μM; 72 h) induces apoptosis in L540 cells^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Western Blot Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>L540, HDLM-2, MDA-MB-468 cells</td> </tr> <tr> <td>Concentration:</td> <td>0, 10, 30, 50 μM</td> </tr> <tr> <td>Incubation Time:</td> <td></td> </tr> <tr> <td>Result:</td> <td>Decreased the expression of tyrosine phosphorylated STAT3 levels in a dose-dependent manner and showed no changes on total STAT3 levels.</td> </tr> </table> <p>Cell Viability Assay^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>L540, HDLM-2 cells</td> </tr> <tr> <td>Concentration:</td> <td>0, 10, 30, 50 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>72 h</td> </tr> <tr> <td>Result:</td> <td>Promoted cell death in a time- and dose-dependent manner only in L540 cells.</td> </tr> </table> <p>Apoptosis Analysis^[1]</p>	Cell Line:	L540, HDLM-2, MDA-MB-468 cells	Concentration:	0, 10, 30, 50 μM	Incubation Time:		Result:	Decreased the expression of tyrosine phosphorylated STAT3 levels in a dose-dependent manner and showed no changes on total STAT3 levels.	Cell Line:	L540, HDLM-2 cells	Concentration:	0, 10, 30, 50 μM	Incubation Time:	72 h	Result:	Promoted cell death in a time- and dose-dependent manner only in L540 cells.
Cell Line:	L540, HDLM-2, MDA-MB-468 cells																
Concentration:	0, 10, 30, 50 μM																
Incubation Time:																	
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Cell Line:	L540, HDLM-2 cells																
Concentration:	0, 10, 30, 50 μM																
Incubation Time:	72 h																
Result:	Promoted cell death in a time- and dose-dependent manner only in L540 cells.																

Cell Line:	L540 cells
Concentration:	0, 10, 30, 50 μ M
Incubation Time:	72 h
Result:	Induced apoptosis in L540 cells and increased the expression of cleavage of Poly (ADP-ribose) polymerase (PARP) and cleaved caspase-3 and cleaved caspase-3, decreased the expression of Bcl-2, Bcl-xL, Mcl-1, and survivin in a dose-dependent manner.

REFERENCES

[1]. Kim BH, et al. MS-1020 is a novel small molecule that selectively inhibits JAK3 activity. Br J Haematol. 2010 Jan;148(1):132-43.

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

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