

Ropeginterferon alfa-2b

Cat. No.:	HY-P99348
CAS No.:	1335098-50-4
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Ropeginterferon alfa-2b (Ropeginterferon alfa-2b-njft) is a monopegylated IFN- α that can be used for the research of myeloproliferative neoplasms ^[1] .																								
In Vitro	<p>Ropeginterferon alfa-2b (5 μg/mL; 72 h) suppresses growth, induces apoptosis and arrests cell cycle at G1 phase in BA-1 cells ^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Proliferation Assay^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>BA-1 cells</td> </tr> <tr> <td>Concentration:</td> <td>5 μg/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>72 h</td> </tr> <tr> <td>Result:</td> <td>Suppressed BA-1 growth.</td> </tr> </table> <p>Apoptosis Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>BA-1 cells</td> </tr> <tr> <td>Concentration:</td> <td>5 μg/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>24, 48 and 72 h</td> </tr> <tr> <td>Result:</td> <td>Showed an increase in early- and late-apoptotic cells in a time-dependent manner. Promoted a time-dependent increase in caspase-3 expression.</td> </tr> </table> <p>Cell Cycle Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>BA-1 cells</td> </tr> <tr> <td>Concentration:</td> <td>5 μg/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>24, 48 and 72 h</td> </tr> <tr> <td>Result:</td> <td>Induced an increase in G1 phase.</td> </tr> </table>	Cell Line:	BA-1 cells	Concentration:	5 μ g/mL	Incubation Time:	72 h	Result:	Suppressed BA-1 growth.	Cell Line:	BA-1 cells	Concentration:	5 μ g/mL	Incubation Time:	24, 48 and 72 h	Result:	Showed an increase in early- and late-apoptotic cells in a time-dependent manner. Promoted a time-dependent increase in caspase-3 expression.	Cell Line:	BA-1 cells	Concentration:	5 μ g/mL	Incubation Time:	24, 48 and 72 h	Result:	Induced an increase in G1 phase.
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In Vivo

Ropeginterferon alfa-2b (5 µg/mouse; s.c.; single dose) decreases the leukemia burden and leads to the long-term survival of mice^[1].

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Animal Model:	C57BL/6 mice (8-12 weeks) with BA-1 cells ^[1]
Dosage:	5 µg/mouse
Administration:	Subcutaneous injection, on day 5 after tumor inoculation
Result:	Led to long-term remission in four of eight (50%) mice.

REFERENCES

[1]. Sakatoku K, et al. Immunomodulatory and direct activities of ropeginterferon alfa-2b on cancer cells in mouse models of leukemia. *Cancer Sci.* 2022 Jul;113(7):2246-2257.

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

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