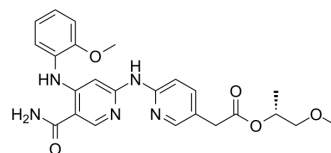


## JAK-IN-33

Cat. No.:	HY-157011
CAS No.:	3032404-49-9
Molecular Formula:	C <sub>24</sub> H <sub>27</sub> N <sub>5</sub> O <sub>5</sub>
Molecular Weight:	465.5
Target:	JAK
Pathway:	Epigenetics; JAK/STAT Signaling; Protein Tyrosine Kinase/RTK; Stem Cell/Wnt
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	JAK-IN-33 (compound 3 (R)) is a JAK inhibitor <sup>[1]</sup> .								
<b>In Vitro</b>	<p>JAK-IN-33 can be effectively applied in blood<sup>[1]</sup>.</p> <p>JAK-IN-33 (59 μM, 40 h) can significantly reduce the elevation of GSVA (gene set variation analysis) score stimulated by IL4/IL3 in the human skin, making GSVA score more normal<sup>[1]</sup>.</p> <p>JAK-IN-33 (59 μM, 40 h) has acceptable stability in the human skin, and can be effectively applied in human skin<sup>[1]</sup>.</p> <p>JAK-IN-33 (0.324 μL, 40 h) significantly inhibits the expression of TARC and two AD (atopic dermatitis) relevant biomarkers MMP12 and Eotaxin 3 in the Franz cells<sup>[1]</sup>.</p> <p>JAK-IN-33 is rapidly inactivated in the liver and is expected to have a better targeted systemic safety profile after topical application compares to oral JAK inhibitors repurposed for topical uses.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Real Time qPCR<sup>[1]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>Franz</td> </tr> <tr> <td>Concentration:</td> <td>0.324 μL</td> </tr> <tr> <td>Incubation Time:</td> <td>40 h</td> </tr> <tr> <td>Result:</td> <td>Significantly inhibited the expression of TARC, MMP12 and Eotaxin 3.</td> </tr> </table>	Cell Line:	Franz	Concentration:	0.324 μL	Incubation Time:	40 h	Result:	Significantly inhibited the expression of TARC, MMP12 and Eotaxin 3.
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### REFERENCES

[1]. Thoma G, Decoret O, et al. Design of a Supersoft Topical JAK Inhibitor, Which Is Effective in Human Skin but Rapidly Deactivated in Blood. *J Med Chem.* 2023;66(21):15042-15053.

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

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