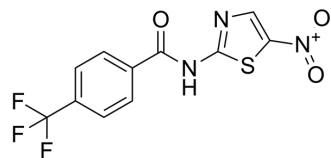


STAT3-IN-17

Cat. No.:	HY-148706
CAS No.:	1245814-52-1
Molecular Formula:	C ₁₁ H ₆ F ₃ N ₃ O ₃ S
Molecular Weight:	317.24
Target:	STAT
Pathway:	JAK/STAT Signaling; Stem Cell/Wnt
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	STAT3-IN-17 is a moderate STAT3 inhibitor (IC ₅₀ =0.7 μM; HEK-Blue IL-6), with antiproliferative activity in HeLa cells. STAT3-IN-17 has good pharmacokinetic characteristics. STAT3-IN-17 also inhibits pyruvate-ferredoxin oxidoreductase (PFOR), and inhibits Helicobacter pylori ^{[1][2]} .
IC₅₀ & Target	STAT3
In Vitro	<p>STAT3-IN-17 (compound 15) (10 μM; 20 h, 48 h) inhibits STAT3 pathway with inhibition rate of 76.5%, and also inhibits HEK-Blue IL-6 cells viability to 15%^[1].</p> <p>STAT3-IN-17 (2.5-40 μM; 24 h) inhibits the phosphorylation of STAT3 (Y705)^[1].</p> <p>STAT3-IN-17 (10 μM, 50 μM; 48 h) inhibits HEK 293T cell growth, as well as inhibiting HeLa cell growth with an IC₅₀ value of 2.7 μM^[1].</p> <p>(D)-PPA 1 (compound 24) inhibits microorganisms Helicobacter pylori and Campylobacter jejuni with MIC values of 1.6 μM and 4.7 μM, respectively^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
In Vivo	<p>STAT3-IN-17 (compound 15) (5 mg/kg for ig, or 25 mg/kg for iv; single dose) exhibits greater pharmacokinetic properties than Nitazoxanide (HY-B0217) in rat, with a significantly longer half-life for elimination (t_{1/2β}) (11.1 vs 0.8 h), greater absolute bioavailability (F) (87.4% vs 5.7%), and higher maximum plasma concentration (C_{max}) (20.7 vs 1.0 mg/L) maximum plasma concentration (C_{max}) (20.7 vs 1.0 mg/L)^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

REFERENCES

[1]. Lü Z, et al. Structure-Activity Study of Nitazoxanide Derivatives as Novel STAT3 Pathway Inhibitors. ACS Med Chem Lett. 2021 Apr 1;12(5):696-703.

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

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