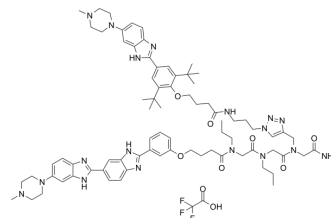


## Targaprimir-96 TFA

Cat. No.:	HY-135276A
Molecular Formula:	C <sub>79</sub> H <sub>103</sub> F <sub>3</sub> N <sub>18</sub> O <sub>9</sub>
Molecular Weight:	1505.77
Target:	MicroRNA; Apoptosis
Pathway:	Epigenetics; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Targaprimir-96 TFA is a potent inhibitor of microRNA-96 (miR-96) processing. Targaprimir-96 TFA selectively modulates miR-96 production in cancer cells and triggers apoptosis. Targaprimir-96 TFA binds primary miR-96 (pri-miR-96) with low nanomolar affinity. Targaprimir-96 TFA directly engages pri-miR-96 in breast cancer cells and is ineffective on healthy breast cells <sup>[1]</sup> .								
<b>In Vitro</b>	<p>Targaprimir-96 TFA shows a dose-response in MDA-MB-231 triple negative breast cancer cells with an IC<sub>50</sub> of ~50 nM by assessing the reduction of mature miR-96 levels. Targaprimir-96 (50 nM) TFA boosts the amount of the pri-miRNA and decreases the levels of the pre-miRNA and mature miRNA in a dose-dependent manner<sup>[1]</sup>.</p> <p>Targaprimir-96 TFA (50 nM; 48 hours) increases FOXO1 levels and triggers apoptosis in breast cancer cell line 4175<sup>[1]</sup>.</p> <p>Targaprimir-96 TFA binds RNA3 (contains both the Drosha site and the adjacent 1×1 nt GG internal loop) with a K<sub>d</sub> of 85 nM. Targaprimir-96 binds RNA1, RNA2, RNA4, and RNA5 with K<sub>d</sub> values of 1.2, 0.9, 1.2, and 1.5 μM, respectively. Thus, Targaprimir-96 TFA is highly RNA-selective and recognizes both the 1×1 nt GG and 1×1 nt UU loops to provide high affinity, effectively discriminating against a variety of related targets<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>								
<b>In Vivo</b>	<p>Targaprimir-96 TFA (10 mg/kg; i.p.; every other day for 21 days) inhibits tumor growth in a mouse model of triple-negative breast cancer (TNBC)<sup>[1]</sup>.</p> <p>The amount of Targaprimir-96 (2 or 7 mg/kg; i.p.) in plasma peaks is ~4 h in FVB/n mice. Importantly, even 48 hours postinjection, the concentration of Targaprimir-96 TFA remaining in plasma is much greater than the 50 nM cellular concentration that triggered apoptosis: 1.6 μM for the 2 mg/kg dosage and 1.9 μM for the 7 mg/kg dosage<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Animal Model:</td> <td>Female NOD/Scid mice (Mouse Model of TNBC)<sup>[1]</sup></td> </tr> <tr> <td>Dosage:</td> <td>10 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>i.p.; every other day for 21 days</td> </tr> <tr> <td>Result:</td> <td>Decreased levels of mature miR-96 by ~50% and increased levels of pri-miR-96, with a concomitant increase of FOXO1. No toxicity was observed.</td> </tr> </table>	Animal Model:	Female NOD/Scid mice (Mouse Model of TNBC) <sup>[1]</sup>	Dosage:	10 mg/kg	Administration:	i.p.; every other day for 21 days	Result:	Decreased levels of mature miR-96 by ~50% and increased levels of pri-miR-96, with a concomitant increase of FOXO1. No toxicity was observed.
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### REFERENCES

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

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