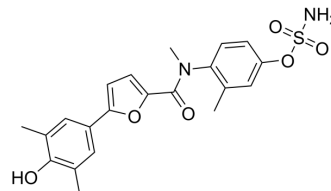


## Steroid sulfatase/17β-HSD1-IN-5

<b>Cat. No.:</b>	HY-155010
<b>Molecular Formula:</b>	C <sub>21</sub> H <sub>22</sub> N <sub>2</sub> O <sub>6</sub> S
<b>Molecular Weight:</b>	430.47
<b>Target:</b>	Steroid Sulfatase
<b>Pathway:</b>	Metabolic Enzyme/Protease
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

**Description** Steroid sulfatase/17β-HSD1-IN-5 is an irreversible inhibitor of steroid sulfatase (STS). Steroid sulfatase/17β-HSD1-IN-5 is a reversible and selective inhibitor of 7β-hydroxysteroid dehydrogenase type 1 (17β-HSD1), with IC<sub>50</sub>s of 43 nM and 6.2 μM for 17β-HSD1 and 17β-HSD2, respectively. Steroid sulfatase/17β-HSD1-IN-5 can be used for metabolic disease (especially for endometriosis) research<sup>[1]</sup>.

**IC<sub>50</sub> & Target**  
 IC<sub>50</sub>: 43 nM (17β-HSD 1)<sup>[1]</sup>  
 IC<sub>50</sub>: 6.3 μM (17β-HSD 2)<sup>[1]</sup>  
 IC<sub>50</sub>: 0.4 μM (Steroid sulfatase)<sup>[1]</sup>

**In Vitro** Steroid sulfatase/17β-HSD1-IN-5 (Compound 5) (0-40 μM) (48-72 hour) has no effect on cell viability up to 31 μM (HEK293) and 23 μM (HepG2), respectively. MCE has not independently confirmed the accuracy of these methods. They are for reference only.  
 Cell Viability Assay<sup>[1]</sup>

Cell Line:	HEK293 and HepG2 cells
Concentration:	0-30 μM
Incubation Time:	48-72 hours
Result:	Had no effect on cell viability up to 31 μM (HEK293) and 23 μM (HepG2), respectively.

**In Vivo** Steroid sulfatase/17β-HSD1-IN-5 (Compound 5) (50 mg/kg for s.c.; single dose) shows a T<sub>1/2z</sub> of 3.82 h and C<sub>max obs</sub> of 2824 nM<sup>[1]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female C57BL/6 mice (Pharmacokinetic assay) <sup>[1]</sup>
Dosage:	50 mg/kg
Administration:	Subcutaneous injection (s.c.), single dose
Result:	Pharmacokinetic parameters for Steroid sulfatase/17β-HSD1-IN-5 (Compound 5) in female C57BL/6 mice <sup>[1]</sup>

Route	Dose (mg/kg)	C <sub>max</sub> obs (nM)	C <sub>24</sub> (nM)	T <sub>1/2z</sub> (h)	AUC <sub>0-24</sub> (ng•h/mL)
s.c.	50	2824	797	3.82	11600

## REFERENCES

[1]. Mohamed Salah, et.al. Potent Dual Inhibitors of Steroid Sulfatase and 17 $\beta$ -Hydroxysteroid Dehydrogenase Type 1 with a Suitable Pharmacokinetic Profile for Proof-of-Principle Studies in an Endometriosis Mouse Model. *Journal of Medicinal Chemistry* 2023 66 (13), 8975-8992.

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

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