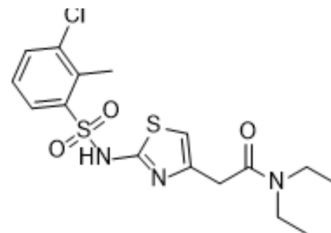


## BVT-14225

<b>Cat. No.:</b>	HY-18055		
<b>CAS No.:</b>	376638-65-2		
<b>Molecular Formula:</b>	C <sub>16</sub> H <sub>20</sub> ClN <sub>3</sub> O <sub>3</sub> S <sub>2</sub>		
<b>Molecular Weight:</b>	401.93		
<b>Target:</b>	11 $\beta$ -HSD		
<b>Pathway:</b>	Metabolic Enzyme/Protease		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO :  $\geq$  100 mg/mL (248.80 mM)  
 \* " $\geq$ " means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.4880 mL	12.4400 mL	24.8800 mL
	5 mM	0.4976 mL	2.4880 mL	4.9760 mL
	10 mM	0.2488 mL	1.2440 mL	2.4880 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility:  $\geq$  2.5 mg/mL (6.22 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE- $\beta$ -CD in saline)  
Solubility:  $\geq$  2.5 mg/mL (6.22 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility:  $\geq$  2.5 mg/mL (6.22 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

BVT-14225 is a selective 11 $\beta$ -Hydroxysteroid dehydrogenase type 1 (11 $\beta$ -HSD1) inhibitor with an IC<sub>50</sub> of 52 nM.

#### IC<sub>50</sub> & Target

IC<sub>50</sub>: 52 nM (11 $\beta$ -HSD1)<sup>[1]</sup>

#### In Vitro

Selective inhibition of 11 $\beta$ -HSD1 decreases blood glucose concentrations in hyperglycaemic mice. Selective inhibitors of 11  $\beta$ -HSD1 have considerable potential as treatments for a number of diseases of great unmet medical need such as type 2

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diabetes, obesity and metabolic syndrome, a multifactorial disorder. BVT-14225 shows high activity in the enzyme assay with 90% inhibition at 10  $\mu$ M. It has an  $IC_{50}$  for 11 $\beta$ -HSD1 on a human enzyme assay of 52 nM<sup>[2]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## CUSTOMER VALIDATION

- Endocrinology. 2022 Jul 1;163(7):bqac068.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Barf T, et al. Arylsulfonamidothiazoles as a new class of potential antidiabetic drugs. Discovery of potent and selective inhibitors of the 11beta-hydroxysteroid dehydrogenase type 1. J Med Chem. 2002 Aug 29;45(18):3813-5.

[2]. Vicker N, et al. Novel non-steroidal inhibitors of human 11beta-hydroxysteroid dehydrogenase type 1. J Steroid Biochem Mol Biol. 2007 May;104(3-5):123-9.

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

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