Ezutromid

Cat. No.: HY-17614

CAS No.: 945531-77-1

Molecular Formula: $C_{19}H_{15}NO_3S$

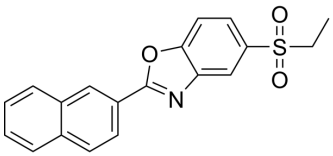
Molecular Weight: 337.39

Target: Cytochrome P450

Pathway: Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 10 mg/mL (29.64 mM; Need ultrasonic and warming)

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	2.9639 mL	14.8196 mL	29.6393 mL
5 mM	0.5928 mL	2.9639 mL	5.9279 mL
10 mM	0.2964 mL	1.4820 mL	2.9639 mL

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

BIOLOGICAL ACTIVITY

Description

Ezutromid (SMT C1100) is a first-in-class, orally active benzoxazole utrophin modulator with an EC_{50} of 0.91 μM. Ezutromid can be used for the research Duchenne muscular dystrophy (DMD). Ezutromid inhibits CYP1A2 enzymic activity in human liver microsomes (HLM) with an IC_{50} of 5.4 μM[1][2].

IC_{50} & Target

CYP1

In Vitro

Ezutromid induces increased levels of utrophin RNA in human muscle cells. Treatment of human DMD cells with Ezutromid lead to a 2-fold increase in utrophin protein levels at an optimal concentration of 0.3 uM after 3 days of treatment. Ezutromid was safe and well tolerated with plasma concentrations achieved suf cient to cause a 50% increase in concentrations of utrophin in cells. Ezutromid led to a 30% increase in Utrn mRNA level and resulted in a 2.0-fold increase in UTRN protein level[3][4][5].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Note: You can dissolve the products in phosphate buffered saline (PBS), 0.1% Tween-20, 5% DMSO)

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REFERENCES

[1]. Tinsley JM et al. Daily treatment with SMTC1100, a novel small molecule utrophin upregulator, dramatically reduces the dystrophic symptoms in the mdx mouse. PLoS One. 2011 May 6;6(5):e19189.

[2]. Tinsley J et al. Safety, tolerability, and pharmacokinetics of SMT C1100, a 2-arylbenzoxazole utrophin modulator, following single- and multiple-dose administration to healthy male adult volunteers. J Clin Pharmacol. 2015 Jun;55(6):698-707.

[3]. Guiraud S et al. Second-generation compound for the modulation of utrophin in the therapy of DMD. Hum Mol Genet. 2015 Aug 1;24(15):4212-24.

[4]. Chancellor DR, et al. Discovery of 2-arylbenzoxazoles as upregulators of utrophin production for the treatment of Duchenne muscular dystrophy. J Med Chem. 2011;54(9):3241-3250.

[5]. Chatzopoulou M, et al. Isolation, Structural Identification, Synthesis, and Pharmacological Profiling of 1,2-trans-Dihydro-1,2-diol Metabolites of the Utrophin Modulator Ezutromid. J Med Chem. 2020;63(5):2547-2556.

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