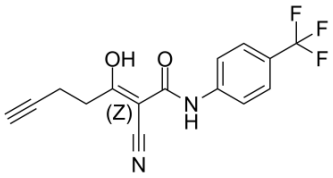
Manitimus

Cat. No.:	HY-101603
CAS No.:	202057-76-9
Molecular Formula:	$C_{15}H_{11}F_3N_2O_2$
Molecular Weight:	308.26
Target:	Others
Pathway:	Others

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 : 250 mg/mL (811.00 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.2440 mL	16.2201 mL	32.4401 mL
5 mM	0.6488 mL	3.2440 mL	6.4880 mL
10 mM	0.3244 mL	1.6220 mL	3.2440 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 6.25 mg/mL (20.28 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 6.25 mg/mL (20.28 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Manitimus is an inhibitor of dehydroorotate dehydrogenase, and a potent immunosuppressive drug.

In Vivo

In the Manitimus-treated rats, there is a dose-related, differential effect: mean survival is 15.7 days in group 4 (Manitimus 5 mg/kg), 19.1 days in group 5 (Manitimus 10 mg/kg) and 25.4 days in group 6 (Manitimus 20 mg/kg)[1]. Manitimus (15 mg/kg, p.o.) results in a significant decrease in neointimal area and percentage of stenosis versus the control rats, and diminishes the effect that CMV infection results in a significant increase in intimal and medial cross-sectional area and medial wall thickness of the vein grafts[2].

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

PROTOCOL

Animal Administration [2]	The whole experiment consists of a total of four experimental groups (n = 10 animals/group) which all undergo surgery. Furthermore, rats are either infected with CMV, treated with Manitimusor both. A control group only receive the Manitimus solvent (1 mL of a 1% carboxymethylcellulose solution in water). Infection is established by inoculating rats intraperitoneally with 1.25×10^6 plaque-forming units of homogenized salivary gland-derived rat CMV immediately after surgery.

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

REFERENCES

[1]. Birnbaum F, et al. The new malononitrilamide immunosuppressant FK778 prolongs corneal allograft survival in the rat keratoplasty model. Eye (Lond). 2007 Dec;21(12):1516-23. Epub 2007 Mar 30.

[2]. Kloppenburg G, et al. FK778 attenuates cytomegalovirus-enhanced vein graft intimal hyperplasia in a rat model. Intervirology. 2009;52(4):189-95.

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