CXL-1020

Cat. No.: HY-147384

CAS No.: 950834-06-7

Molecular Formula: $C_7H_9NO_5S_2$

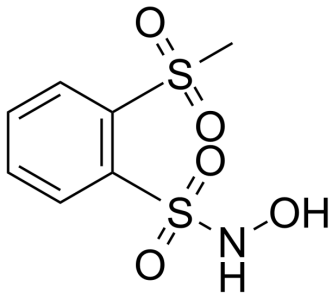
Molecular Weight: 251.28

Target: Calcium Channel

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

Storage:

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



BIOLOGICAL ACTIVITY

Description

CXL-1020 is a hydroxylamine-based nitroxyl (HNO) donor. CXL-1020 improves cardiac inotropy/lusitropy and Ca^{2+} cycling in rats with abnormal relaxation. CXL-1020 induces vasorelaxation and improves cardiac function in canine models. CXL-1020 has been used to research systolic heart failure and stable heart failure[1].

IC_{50} & Target

L-type calcium channel

In Vivo

CXL-1020 (100 μg/kg/min; infusion for 30 min) improves hemodynamics and cardiac function, and enhances both diastolic and systolic performance in mice[1].

CXL-1020 (3 and 10 mg/kg/min; 4-hour intravenous infusion) improves left ventricular systolic and diastolic function in dogs with advanced heart failure[2].

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

Animal Model:	Adult male Sprague-Dawley rats (250-350 g; induced cardiac dysfunction by isoproterenol) [1]
Dosage:	100 μg/kg/min
Administration:	For 30 min
Result:	Improved hemodynamics and cardiac function in normal rats, and enhanced both diastolic and systolic performance in cardiac dysfunction mice.

Animal Model:	Dogs (coronary microembolization-induced heart failure)[2]3 and 10 mg/kg/min
Dosage:	3 and 10 mg/kg/min
Administration:	4-hour intravenous infusion
Result:	Decreased systolic aortic pressure (AoP) modestly; significantly increased EF and deceleration time of early mitral inflow velocity (DT) and significantly lowered left ventricular (LV) end-systolic volume (ESV), LV end-diastolic pressure (EDP) and end-

	diastolic wall stress (EDWS) in a dose-dependent manner.

REFERENCES

[1]. Roof SR, et al. CXL-1020, a Novel Nitroxyl (HNO) Prodrug, Is More Effective than Milrinone in Models of Diastolic Dysfunction-A Cardiovascular Therapeutic: An Efficacy and Safety Study in the Rat. Front Physiol. 2017 Nov 10;8:894.

[2]. Mengjun Wang, et al. Intravenous Infusion of CXL-1020, a Novel Nitroxyl (HNO) Donor, Improves Left Ventricular Systolic and Diastolic Function in Dogs with Advanced Heart Failure. CARDIOVASCULAR PHARMACOLOGY. VOLUME 15, ISSUE 6, SUPPLEMENT, S73-S74, AUGUS

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