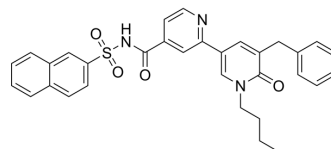


## SERCA2a activator 1

<b>Cat. No.:</b>	HY-124873		
<b>CAS No.:</b>	2139330-34-8		
<b>Molecular Formula:</b>	C <sub>32</sub> H <sub>29</sub> N <sub>3</sub> O <sub>4</sub> S		
<b>Molecular Weight:</b>	551.66		
<b>Target:</b>	Calcium Channel		
<b>Pathway:</b>	Membrane Transporter/Ion Channel; Neuronal Signaling		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 62.5 mg/mL (113.29 mM; ultrasonic and warming and heat to 80°C)

Concentration	Mass			
	1 mg	5 mg	10 mg	
1 mM	1.8127 mL	9.0636 mL	18.1271 mL	
5 mM	0.3625 mL	1.8127 mL	3.6254 mL	
10 mM	0.1813 mL	0.9064 mL	1.8127 mL	

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

### BIOLOGICAL ACTIVITY

#### Description

SERCA2a activator 1 (Compound A) is a sarco/endoplasmic reticulum Ca<sup>2+</sup>-dependent ATPase 2a (SERCA2a) activator. SERCA2a activator 1 attenuates phospholamban inhibition and enhances the systolic and diastolic functions of the heart. SERCA2a activator 1 can be used for heart failure<sup>[1]</sup>.

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

SERCA2a<sup>[1]</sup>

#### In Vitro

SERCA2a activator 1 (Compound A) activates the Ca<sup>2+</sup>-dependent ATPase activity of cardiac sarcoplasmic reticulum (SR) vesicles but not that of skeletal muscle SR vesicles that lack phospholamban (PLN). The surface plasmon resonance assay reveals a direct interaction between SERCA2a activator 1 and PLN, suggesting that the binding of SERCA2a activator 1 to PLN attenuates its inhibition of SERCA2a, resulting in SERCA2a activation<sup>[1]</sup>. SERCA2a activator 1 also increases the Ca<sup>2+</sup> transients and contraction and relaxation of isolated adult rat cardiomyocytes. In isolated perfused rat hearts, the SERCA2a activator 1 enhances systolic and diastolic functions<sup>[1]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

SERCA2a activator 1 (Compound A; 30mg/kg; intravenous injection; male Wistar rats) treatment significantly enhances the

diastolic function in anesthetized normal rats<sup>[1]</sup>.

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

Animal Model:	Male Wistar rats (7-8 weeks old) <sup>[1]</sup>
Dosage:	30mg/kg
Administration:	Intravenous injection
Result:	Significantly enhanced the diastolic function in anesthetized normal rats.

## REFERENCES

[1]. Kaneko M, et al. A pyridone derivative activates SERCA2a by attenuating the inhibitory effect of phospholamban. Eur J Pharmacol. 2017 Nov 5;814:1-8.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA