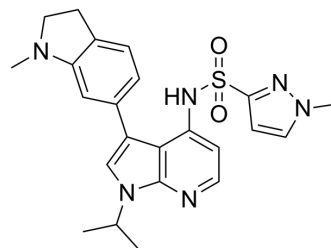


## GSK2795039

<b>Cat. No.:</b>	HY-18950		
<b>CAS No.:</b>	1415925-18-6		
<b>Molecular Formula:</b>	C <sub>23</sub> H <sub>26</sub> N <sub>6</sub> O <sub>2</sub> S		
<b>Molecular Weight:</b>	450.56		
<b>Target:</b>	NADPH Oxidase; Reactive Oxygen Species; Apoptosis		
<b>Pathway:</b>	Metabolic Enzyme/Protease; Immunology/Inflammation; NF-κB; Apoptosis		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	1 year
		-20°C	6 months



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (221.95 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	2.2195 mL	11.0973 mL	22.1946 mL
		5 mM	0.4439 mL	2.2195 mL	4.4389 mL
10 mM		0.2219 mL	1.1097 mL	2.2195 mL	
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 20% DMSO, 20% Tween 80, 60% polyethylene glycol 200 Solubility: 10 mg/mL (22.19 mM); Clear solution; Need ultrasonic</li> <li>Add each solvent one by one: 15% Cremophor EL &gt;&gt; 85% Saline Solubility: 6.67 mg/mL (14.80 mM); Suspended solution; Need ultrasonic</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.5 mg/mL (5.55 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.5 mg/mL (5.55 mM); Clear solution</li> </ol>				

### BIOLOGICAL ACTIVITY

<b>Description</b>	GSK2795039 is a NADPH oxidase 2 (NOX2) inhibitor with a mean pIC <sub>50</sub> of 6 in different cell-free assays. GSK2795039 inhibits reactive oxygen species (ROS) production and NADPH consumption <sup>[1]</sup> . GSK2795039 reduces apoptosis <sup>[2]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	NOX2

## In Vitro

GSK2795039 (25  $\mu$ M; 24 hours) reduces the combinatory effect of FeSO<sub>4</sub> and LPS-increased levels of apoptosis and reduced the presence of caspase-3-positive PC12 cells<sup>[2]</sup>.

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

### Apoptosis Analysis<sup>[2]</sup>

Cell Line:	PC12 cells
Concentration:	25 $\mu$ M
Incubation Time:	24 hours
Result:	Reduced apoptosis among PC12 cells.

## In Vivo

GSK2795039 (intraperitoneal injection; 100 mg/kg; 1 hour before) decreases activity in a murine model of acute pancreatitis, reducing the levels of serum amylase triggered by systemic injection of cerulein<sup>[1]</sup>.

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

Animal Model:	C57BL6 mice <sup>[1]</sup>
Dosage:	100 mg/kg
Administration:	Intraperitoneal injection; 100 mg/kg; 1 hour before
Result:	Caused 50% reduction in the level of serum amylase activity.

## CUSTOMER VALIDATION

- Nat Immunol. 2021 Sep;22(9):1107-1117.
- Cell Host Microbe. 2022 Oct 12;30(10):1450-1463.e8.
- ACS Nano. 2022 Oct 26.
- Nat Commun. 2020 Mar 6;11(1):1242.
- J Extracell Vesicles. 2020 May 4;9(1):1757900.

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## REFERENCES

[1]. Hirano K, et al. Discovery of GSK2795039, a Novel Small Molecule NADPH Oxidase 2 Inhibitor. Antioxid Redox Signal. 2015 Aug 10;23(5):358-74.

[2]. Yauger YJ, et al. Iron accentuated reactive oxygen species release by NADPH oxidase in activated microglia contributes to oxidative stress in vitro. J Neuroinflammation. 2019 Feb 18;16(1):41.

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

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