

## Delcasertib hydrochloride

<b>Cat. No.:</b>	HY-106262B	
<b>Molecular Formula:</b>	C <sub>120</sub> H <sub>200</sub> ClN <sub>45</sub> O <sub>34</sub> S <sub>2</sub>	
<b>Molecular Weight:</b>	2916.74	
<b>Sequence Shortening:</b>	Sequence 1:CYGRKKRRQRRR;Sequence 1':CSFNSEYELGSL (Disulfide bridge:Cys1-Cys1')	Sequence 1:Cys-Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg; Sequence 1':Ser-Phe-Asn-Ser-Tyr-Glu-Leu-Gly-Ser-Leu (Disulfide bridge:Cys <sub>1</sub> -Cys <sub>1</sub> ') (HCl salt)
<b>Target:</b>	PKC	
<b>Pathway:</b>	Epigenetics; TGF-beta/Smad	
<b>Storage:</b>	Protect from light	
	Powder	-80°C 2 years -20°C 1 year
	* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)	

### SOLVENT & SOLUBILITY

<b>In Vitro</b>	H <sub>2</sub> O : 100 mg/mL (34.28 mM; Need ultrasonic)					
		Solvent Concentration	Mass			
	<b>Preparing Stock Solutions</b>			1 mg	5 mg	10 mg
		1 mM		0.3428 mL	1.7142 mL	3.4285 mL
		5 mM		0.0686 mL	0.3428 mL	0.6857 mL
	10 mM		0.0343 mL	0.1714 mL	0.3428 mL	
Please refer to the solubility information to select the appropriate solvent.						

### BIOLOGICAL ACTIVITY

<b>Description</b>	Delcasertib (KAI-9803) hydrochloride is a potent and selective $\delta$ -protein kinase C ( $\delta$ PKC) inhibitor. Delcasertib (KAI-9803) hydrochloride could ameliorate injury associated with ischemia and reperfusion in animal models of acute myocardial infarction (MI) <sup>[1][2]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	$\delta$ PKC
<b>In Vitro</b>	Delcasertib (KAI-9803) is composed of a selective $\delta$ -protein kinase C ( $\delta$ PKC) inhibitor peptide derived from the $\delta$ V1-1 portion of $\delta$ PKC (termed "cargo peptide"), conjugated reversibly to the cell-penetrating peptide 11-amino acid, arginine-rich sequence of the HIV type 1 transactivator protein (TAT47-57; termed "carrier peptide") via a disulfide bond <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	Delcasertib (KAI-9803, a single intraperitoneal injection) in mice results in the selective inhibition of PKC translocation in the liver, kidney, lung, heart, and brain <sup>[1]</sup> . Delcasertib (KAI-9803) administration at the end of ischemia has been found to reduce cardiac damage caused by ischemia-reperfusion in a rat model of acute myocardial infarction <sup>[1]</sup> .

Delcasertib (KAI-9803) has been studied for the prevention of reperfusion injury in patients undergoing angioplasty after acute myocardial infarction<sup>[2]</sup>.

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Animal Model:	Six-week-old male Crl:CD(SD) rats <sup>[1]</sup>
Dosage:	1 mg/kg (Pharmacokinetic Analysis).
Administration:	Via the femoral vein.
Result:	The distribution to tissues such as the liver, kidney, and heart is facilitated by the reversible conjugation to TAT47-57.

## CUSTOMER VALIDATION

- Nature. 2021 Mar;591(7851):620-626.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Miyaji Y, et al. Distribution of KAI-9803, a novel  $\delta$ -protein kinase C inhibitor, after intravenous administration to rats. Drug Metab Dispos. 2011 Oct;39(10):1946-53.

[2]. Bates E, et al. Intracoronary KAI-9803 as an adjunct to primary percutaneous coronary intervention for acute ST-segment elevation myocardial infarction. Circulation. 2008 Feb 19;117(7):886-96.

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

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