

## PG-931

<b>Cat. No.:</b>	HY-P1208
<b>CAS No.:</b>	667430-81-1
<b>Molecular Formula:</b>	C <sub>59</sub> H <sub>85</sub> N <sub>15</sub> O <sub>11</sub>
<b>Molecular Weight:</b>	1180.4
<b>Sequence Shortening:</b>	Ac-{Nle}-DP-{D-Phe}-RWKPV-NH <sub>2</sub> (Lactam bridge:Asp <sup>2</sup> -Lys <sup>7</sup> )
<b>Target:</b>	Melanocortin Receptor
<b>Pathway:</b>	GPCR/G Protein; Neuronal Signaling
<b>Storage:</b>	Sealed storage, away from moisture and light, under nitrogen
	Powder    -80°C    2 years
	-20°C    1 year

Ac-{Nle}-DP-{D-Phe}-RWKPV-NH<sub>2</sub> (Lactam bridge:Asp<sup>2</sup>-Lys<sup>7</sup>)

\* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light, under nitrogen)

### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : 100 mg/mL (84.72 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
	Concentration				
	1 mM		0.8472 mL	4.2359 mL	8.4717 mL
	5 mM		0.1694 mL	0.8472 mL	1.6943 mL
	10 mM		0.0847 mL	0.4236 mL	0.8472 mL

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

### BIOLOGICAL ACTIVITY

#### Description

PG-931, an analog of SHU 9119 (HY-P0227), is a potent melanocortin 4 (MC4) receptor (IC<sub>50</sub>=0.58 nM) agonist and is more selective than for the hMC3R (IC<sub>50</sub>=55 nM) or the hMC5R (IC<sub>50</sub>=2.4 nM). PG-931 can reverse haemorrhagic shock and prevent multiple organ damage in vivo<sup>[2]</sup>.

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

IC<sub>50</sub>: 0.58 nM (melanocortin 4 receptor)  
 IC<sub>50</sub>: 2.4 nM (melanocortin 5 receptor)  
 IC<sub>50</sub>: 55 nM (melanocortin 3 receptor)<sup>[1]</sup>

#### In Vivo

PG-931 (intravenous injection; 13-10<sup>8</sup> nmol/kg; single dose) produces a dose-dependent restoration of cardiovascular and respiratory functions, and improved survival in Wistar rats with haemorrhagic shock<sup>[2]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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Animal Model:	Wistar rats <sup>[2]</sup>
Dosage:	13-10 <sup>8</sup> nmol/kg
Administration:	Intravenous injection; single dose
Result:	Exhibitd an anti-shock effect occurred at nanomolar doses.

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## REFERENCES

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[1]. D Giuliani, et al. Selective melanocortin MC4 receptor agonists reverse haemorrhagic shock and prevent multiple organ damage. Br J Pharmacol

[2]. P Grieco, et al. Extensive structure-activity studies of lactam derivatives of MT-II and SHU-9119: their activity and selectivity at human melanocortin receptors 3, 4, and 5. J Pept Res

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

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