

## MM 54

Cat. No.:	HY-P2271
CAS No.:	1313027-43-8
Molecular Formula:	C <sub>70</sub> H <sub>121</sub> N <sub>29</sub> O <sub>15</sub> S <sub>4</sub>
Molecular Weight:	1737.17
Sequence Shortening:	CRPRLCKHCRPRLC (Disulfide bridge:Cys1-Cys6; Cys9-Cys14)
Target:	Apelin Receptor (APJ)
Pathway:	GPCR/G Protein
Storage:	Sealed storage, away from moisture and light, under nitrogen Powder -80°C 2 years -20°C 1 year

CRPRLCKHCRPRLC (Disulfide bridge:Cys1-Cys6; Cys9-Cys14)

\* 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 (57.56 mM)  
\* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
	Concentration				
	1 mM		0.5756 mL	2.8782 mL	5.7565 mL
	5 mM		0.1151 mL	0.5756 mL	1.1513 mL
	10 mM		0.0576 mL	0.2878 mL	0.5756 mL

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

### BIOLOGICAL ACTIVITY

#### Description

MM 54 (compound 5) is a competitive antagonist at APJ, with an IC<sub>50</sub> of 93 nM. MM 54 behaves as a potent and selective inhibitor of apelin binding and APLNR activation<sup>[1][2]</sup>.

#### In Vitro

MM 54 inhibits more than 95% of apelin binding to APLNR at the dose of 10 μM<sup>[2]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

MM 54 (2 mg/kg, ip, bi-weekly for 4 weeks) possesses anti-tumor activity in glioblastoma models with no obvious toxicity<sup>[2]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model: Tumour-bearing nude-mice<sup>[2]</sup>.

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Dosage:	2 mg/kg.
Administration:	Intraperitoneal injection, bi-weekly for 4 weeks.
Result:	Reduced tumor progression (glioblastoma).

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## REFERENCES

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- [1]. N J Maximilian Macaluso, et al. Discovery of a competitive apelin receptor (APJ) antagonist. ChemMedChem. 2011 Jun 6;6(6):1017-23.
- [2]. Elizabeth Harford-Wright, et al. Pharmacological targeting of apelin impairs glioblastoma growth. Brain. 2017 Nov 1;140(11):2939-2954.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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