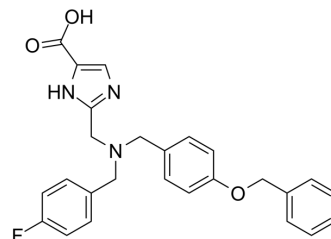


## MMPI-1154

<b>Cat. No.:</b>	HY-117970		
<b>CAS No.:</b>	1382722-47-5		
<b>Molecular Formula:</b>	C <sub>26</sub> H <sub>24</sub> FN <sub>3</sub> O <sub>3</sub>		
<b>Molecular Weight:</b>	445.49		
<b>Target:</b>	MMP		
<b>Pathway:</b>	Metabolic Enzyme/Protease		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 83.33 mg/mL (187.05 mM; Need ultrasonic)			
		Solvent Concentration	Mass	
			1 mg	5 mg
	<b>Preparing Stock Solutions</b>	<b>1 mM</b>	2.2447 mL	11.2236 mL
		<b>5 mM</b>	0.4489 mL	2.2447 mL
		<b>10 mM</b>	0.2245 mL	1.1224 mL
			<b>10 mg</b>	2.2447 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: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.08 mg/mL (4.67 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (4.67 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.08 mg/mL (4.67 mM); Clear solution</li> </ol>			

### BIOLOGICAL ACTIVITY

<b>Description</b>	MMPI-1154 is a promising novel cardio-cytoprotective imidazole-carboxylic acid (ICA) MMP-2 inhibitor (IC <sub>50</sub> =6.6 μM) and can be used for the study of acute myocardial infarction. MMPI-1154 also inhibits the activity of MMP-13, MMP-1 and MMP-9 with IC <sub>50</sub> s of 1.8 μM, 10 μM, and 13 μM, respectively <sup>[1]</sup> .			
<b>IC<sub>50</sub> &amp; Target</b>	MMP-2 6.6 μM (IC <sub>50</sub> )	MMP-13 1.8 μM (IC <sub>50</sub> )	MMP-1 10 μM (IC <sub>50</sub> )	MMP-9 13 μM (IC <sub>50</sub> )

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**In Vitro**

MMPI-1154 (1-100  $\mu\text{M}$ ) inhibits MMP-2 enzyme isolated from rat heart in vitro, and 100% inhibition appears at the concentration 100  $\mu\text{M}$ <sup>[1]</sup>.

MMPI-1154 (1  $\mu\text{M}$ ) shows significant cardio-cytoprotecion, significantly decreases infarct size in an ex vivo model for acute myocardial infarction<sup>[1]</sup>.

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

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**REFERENCES**

[1]. Péter Bencsik, et al. Development of Matrix Metalloproteinase-2 Inhibitors for Cardioprotection. Front Pharmacol. 2018 Apr 5;9:296.

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

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