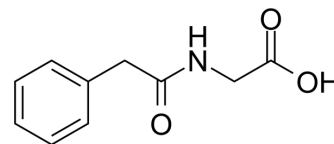


## Phenylacetyl glycine

<b>Cat. No.:</b>	HY-W015061		
<b>CAS No.:</b>	500-98-1		
<b>Molecular Formula:</b>	C <sub>10</sub> H <sub>11</sub> NO <sub>3</sub>		
<b>Molecular Weight:</b>	193.2		
<b>Target:</b>	Endogenous Metabolite; Adrenergic Receptor; Apoptosis		
<b>Pathway:</b>	Metabolic Enzyme/Protease; GPCR/G Protein; Neuronal Signaling; Apoptosis		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (517.60 mM; Need ultrasonic)			
		Solvent Concentration	Mass	
			1 mg	5 mg
			10 mg	
<b>Preparing Stock Solutions</b>	<b>1 mM</b>	5.1760 mL	25.8799 mL	51.7598 mL
	<b>5 mM</b>	1.0352 mL	5.1760 mL	10.3520 mL
	<b>10 mM</b>	0.5176 mL	2.5880 mL	5.1760 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: ≥ 0.83 mg/mL (4.30 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 0.83 mg/mL (4.30 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 0.83 mg/mL (4.30 mM); Clear solution</li> </ol>			

### BIOLOGICAL ACTIVITY

<b>Description</b>	Phenylacetyl glycine is a gut microbial metabolite that can activate β2AR. Phenylacetyl glycine protects against cardiac injury caused by ischemia/reperfusion <sup>[1]</sup> .		
<b>IC<sub>50</sub> &amp; Target</b>	β2 adrenoceptor	Microbial Metabolite	Human Endogenous Metabolite
<b>In Vitro</b>	Phenylacetyl glycine (10-100 μM; 30 min before H/R injury) reduces disreoxygenation (H/R) injury-induced apoptosis and activates Gai and Gas signaling in neonatal mouse cardiomyocytes (NMCMs) <sup>[1]</sup> .		

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

#### Apoptosis Analysis<sup>[1]</sup>

Cell Line:	Neonatal mouse cardiomyocytes (NMCMS)
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Concentration:	10, 33 and 100 $\mu$ M
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Incubation Time:	Half an hour before H/R injury
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Result:	Inhibited disrexygenation injury induced apoptosis.
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#### Western Blot Analysis<sup>[1]</sup>

Cell Line:	Neonatal mouse cardiomyocytes (NMCMS)
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Concentration:	10, 33 and 100 $\mu$ M
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Incubation Time:	Half an hour before H/R injury
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Result:	Significantly decreased the ratio of Bax/Bcl2 and cleaved-caspase 3 expression. Enhanced p-PI3K protein expression. cAMP levels were increased in the early stage and then gradually decreased.
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## CUSTOMER VALIDATION

- Adv Sci (Weinh). 2024 Mar 13:e2306297.

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

## REFERENCES

[1]. Xu X, et al. The gut microbial metabolite phenylacetylglutamine protects against cardiac injury caused by ischemia/reperfusion through activating  $\beta$ 2AR. Arch Biochem Biophys. 2021 Jan 15;697:108720.

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

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