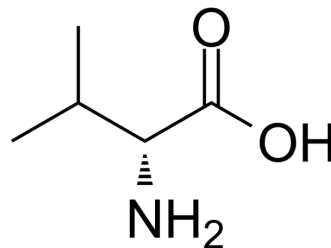


D-Valine

Cat. No.:	HY-N0717A		
CAS No.:	640-68-6		
Molecular Formula:	C ₅ H ₁₁ NO ₂		
Molecular Weight:	117.15		
Target:	Endogenous Metabolite		
Pathway:	Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

H₂O : 14.29 mg/mL (121.98 mM; ultrasonic and warming and heat to 60°C)
 DMSO : < 1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble or slightly soluble)

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1 mg	5 mg	10 mg
	1 mM		8.5361 mL	42.6803 mL	85.3606 mL
	5 mM		1.7072 mL	8.5361 mL	17.0721 mL
	10 mM		0.8536 mL	4.2680 mL	8.5361 mL

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

In Vivo

1. Add each solvent one by one: PBS
 Solubility: 100 mg/mL (853.61 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description	D-Valine is the enantiomer of L-Valine (HY-N0717). L-Valine is one of 20 proteinogenic amino acids. L-Valine is an essential amino acid.
IC₅₀ & Target	Human Endogenous Metabolite
In Vitro	D-valine can be used to prevent the growth of fibroblasts in primary and secondary cell cultures of bovine artery endothelial cells ^[2] . D-valine (>50 mM, 72 h) inhibits biofilm formation of <i>P. gingivalis</i> ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	D-valine (200 mg/kg, i.p.) is not neuroprotectives compared to the biologically active L-isomer in Paraquat-induced

nigrostriatal degeneration mice model^[1].

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

REFERENCES

- [1]. McCormack AL, Di Monte DA. Effects of L-dopa and other amino acids against paraquat-induced nigrostriatal degeneration. *J Neurochem.* 2003 Apr;85(1):82-6.
- [2]. Picciano PT, et al. Effects of D-valine on pulmonary artery endothelial cell morphology and function in cell culture. *Exp Cell Res.* 1984 Mar;151(1):134-47.
- [3]. Qi H, et al. Effects of d-valine on periodontal or peri-implant pathogens: Porphyromonas gingivalis biofilm. *J Periodontol.* 2018 Mar;89(3):303-314.
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Caution: Product has not been fully validated for medical applications. For research use only.

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