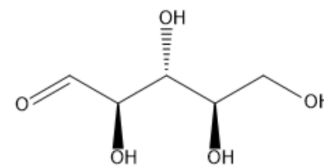


## D-Ribose(mixture of isomers)

<b>Cat. No.:</b>	HY-W018772		
<b>CAS No.:</b>	50-69-1		
<b>Molecular Formula:</b>	C <sub>5</sub> H <sub>10</sub> O <sub>5</sub>		
<b>Molecular Weight:</b>	150.13		
<b>Target:</b>	Endogenous Metabolite		
<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

#### In Vitro

H<sub>2</sub>O : 100 mg/mL (666.09 mM; Need ultrasonic)

DMSO : ≥ 100 mg/mL (666.09 mM)

\* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1 mg	5 mg	10 mg
	1 mM		6.6609 mL	33.3045 mL	66.6089 mL
	5 mM		1.3322 mL	6.6609 mL	13.3218 mL
	10 mM		0.6661 mL	3.3304 mL	6.6609 mL

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

#### In Vivo

- Add each solvent one by one: PBS  
Solubility: 140 mg/mL (932.53 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.5 mg/mL (16.65 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (16.65 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (16.65 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

D-Ribose(mixture of isomers) is an energy enhancer, and acts as a sugar moiety of ATP, and widely used as a metabolic therapy supplement for chronic fatigue syndrome or cardiac energy metabolism. D-Ribose(mixture of isomers) is active in protein glycation, induces NF-κB inflammation in a RAGE-dependent manner<sup>[1]</sup>.

IC <sub>50</sub> & Target	Human Endogenous Metabolite	Microbial Metabolite	Human Endogenous Metabolite	Microbial Metabolite
In Vitro	D-Ribose(mixture of isomers) is an energy enhancer, and acts as a sugar moiety of ATP, and widely used as a metabolic therapy supplement for chronic fatigue syndrome or cardiac energy metabolism <sup>[1]</sup> . D-Ribose(mixture of isomers) is active in protein glycation, induces NF-κB inflammation in a RAGE-dependent manner <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.			

## CUSTOMER VALIDATION

- Oncogenesis. 2020 Sep 17;9(9):82.
- J Cell Mol Med. 2021 May;25(10):4776-4785.

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## REFERENCES

[1]. Hong J, et al. D-ribose induces nephropathy through RAGE-dependent NF-κB inflammation. Arch Pharm Res. 2018 Aug;41(8):838-847.

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

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