Pyruvic acid

Cat. No.: HY-Y0781

CAS No.: 127-17-3

Molecular Formula: $C_3H_4O_3$

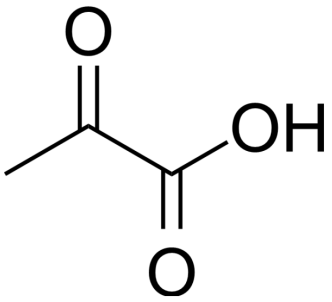
Molecular Weight: 88.06

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage: 4°C, stored under nitrogen

* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 100 mg/mL (1135.59 mM; Need ultrasonic)

DMSO : ≥ 50 mg/mL (567.79 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	11.3559 mL	56.7795 mL	113.5589 mL
	5 mM	2.2712 mL	11.3559 mL	22.7118 mL
	10 mM	1.1356 mL	5.6779 mL	11.3559 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 (1135.59 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.63 mg/mL (29.87 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (28.39 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (28.39 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	Pyruvic acid is an intermediate metabolite in the metabolism of carbohydrates, proteins, and fats.	
IC_{50} & Target	Microbial Metabolite	Human Endogenous Metabolite

CUSTOMER VALIDATION

- Cell Death Dis. 2023 Apr 6;14(4):246.
- Cell Prolif. 2023 Apr 21;e13442.
- Int Immunopharmacol. 2023 May 12;120:110292.
- J Virol. 2024 Feb 6:e0175123.

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REFERENCES

[1]. Kładna A, et al. Reactivity of pyruvic acid and its derivatives towards reactive oxygen species. Luminescence. 2015 Nov;30(7):1153-8.

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

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