



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

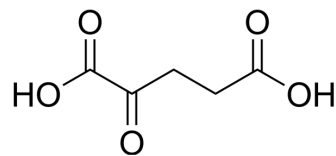
mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic)

2-Ketoglutaric acid

Cat. No.:	HY-W013636		
CAS No.:	328-50-7		
Molecular Formula:	C ₅ H ₆ O ₅		
Molecular Weight:	146.1		
Target:	Endogenous Metabolite; Tyrosinase		
Pathway:	Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (1711.16 mM; Need ultrasonic)
 H₂O : 50 mg/mL (342.23 mM; Need ultrasonic)

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	6.8446 mL	34.2231 mL	68.4463 mL
	5 mM	1.3689 mL	6.8446 mL	13.6893 mL
	10 mM	0.6845 mL	3.4223 mL	6.8446 mL

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

In Vivo

- Add each solvent one by one: PBS
Solubility: 100 mg/mL (684.46 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (14.24 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (14.24 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (14.24 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

2-Ketoglutaric acid (Alpha-Ketoglutaric acid) is an intermediate in the production of ATP or GTP in the Krebs cycle. 2-Ketoglutaric acid also acts as the major carbon skeleton for nitrogen-assimilatory reactions. 2-Ketoglutaric acid is a reversible inhibitor of tyrosinase (IC₅₀=15 mM)^[1].

IC₅₀ & Target	Human Endogenous Metabolite	Microbial Metabolite	Tyrosinase 15 mM (IC ₅₀)
In Vitro	2-Ketoglutaric acid (Alpha-Ketoglutaric acid) has other physiological capabilities including reduction of ammonia level formed in the lung and general ammonia detoxification, protective role against lipid peroxidation and neuroprotective effect against cyanide poisoning ^[1] . 2-Ketoglutaric acid acts as precursor for the synthesis of amino acids and nucleotides ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.		

CUSTOMER VALIDATION

- Gut Microbes. 2023 Jan-Dec;15(1):2186114.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Huergo LF, et al. The Emergence of 2-Oxoglutarate as a Master Regulator Metabolite. Microbiol Mol Biol Rev. 2015 Dec;79(4):419-35.

[2]. Gou L, et al. The effect of alpha-ketoglutaric acid on tyrosinase activity and conformation: Kinetics and molecular dynamics simulation study. Int J Biol Macromol. 2017 Dec;105(Pt 3):1654-1662.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA