



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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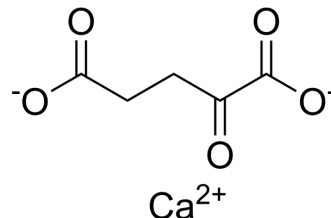
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## Calcium 2-oxoglutarate

<b>Cat. No.:</b>	HY-W013636B
<b>CAS No.:</b>	71686-01-6
<b>Molecular Formula:</b>	C <sub>5</sub> H <sub>4</sub> CaO <sub>5</sub>
<b>Molecular Weight:</b>	184.16
<b>Target:</b>	Tyrosinase; Endogenous Metabolite
<b>Pathway:</b>	Metabolic Enzyme/Protease
<b>Storage:</b>	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : 4.85 mg/mL (26.34 mM); ultrasonic and warming and adjust pH to 4 with HCl and heat to 60°C)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	5.4301 mL	27.1503 mL	54.3006 mL
5 mM	1.0860 mL	5.4301 mL	10.8601 mL
10 mM	0.5430 mL	2.7150 mL	5.4301 mL

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

### BIOLOGICAL ACTIVITY

#### Description

Calcium 2-oxoglutarate is an intermediate in the production of ATP or GTP in the Krebs cycle. Calcium 2-oxoglutarate also acts as the major carbon skeleton for nitrogen-assimilatory reactions. Calcium 2-oxoglutarate is a reversible inhibitor of tyrosinase (IC<sub>50</sub>=15 mM)<sup>[1][2]</sup>.

#### IC<sub>50</sub> & Target

Tyrosinase  
15 mM (IC<sub>50</sub>)

Microbial Metabolite

Human Endogenous Metabolite

#### In Vitro

Calcium 2-oxoglutarate 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<sup>[1]</sup>.

Calcium 2-oxoglutarate acts as precursor for the synthesis of amino acids and nucleotides<sup>[2]</sup>.

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.
- Redox Biol. 2024 Mar 4;71:103112.

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

## REFERENCES

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[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.

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

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