



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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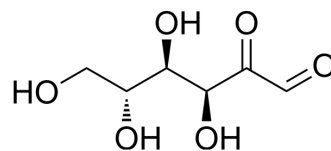
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## 2-Keto-D-Glucose

<b>Cat. No.:</b>	HY-113629
<b>CAS No.:</b>	1854-25-7
<b>Molecular Formula:</b>	C <sub>6</sub> H <sub>10</sub> O <sub>6</sub>
<b>Molecular Weight:</b>	178.14
<b>Target:</b>	Drug Metabolite
<b>Pathway:</b>	Metabolic Enzyme/Protease
<b>Storage:</b>	-20°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : 0.2 mg/mL (1.12 mM; Need ultrasonic and warming)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	5.6136 mL	28.0678 mL	56.1356 mL
5 mM	---	---	---
10 mM	---	---	---

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

### BIOLOGICAL ACTIVITY

#### Description

2-Keto-D-Glucose (D-Glucosone) is a key intermediate in a secondary metabolic pathway leading to the antibiotic Cortalcerone. 2-Keto-D-Glucose is also an intermediate in the conversion of D-glucose into D-fructose. 2-Keto-D-Glucose is found in various natural sources, including fungi, algae, and shellfish<sup>[1][2]</sup>.

#### In Vitro

Pyrrroloquinoline quinone-dependent 2-keto-D-glucose (2KG) dehydrogenase (2KGDH) has high specificity for the oxidation of 2-Keto-D-Glucose to 2-keto-D-gluconic acid (2KGA). *P. aureofaciens* (Pa2KGDH) specifically preferred 2KG as a substrate and oxidized the C-1 position of 2KG, indicating that the enzyme is a 2KGDH<sup>[3]</sup>.

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

### REFERENCES

[1]. Sun, Lianhong, et al. Engineering galactose oxidase to increase expression level in *E. coli*, enhance thermostability, and introduce novel activities. Dissertation (Ph.D.), California Institute of Technology.

[2]. zawa K, et al. A novel pyrroloquinoline quinone-dependent 2-keto-D-glucose dehydrogenase from *Pseudomonas aureofaciens*. *J Bacteriol.* 2015 Apr;197(8):1322-9.

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[3]. Te-ning E.Liu, et al. Convenient, laboratory procedure for producing solid d-arabino-hexos-2-ulose (d-glucosone). Carbohydrate Research. Volume 113, Issue 1, 16 February 1983, Pages 151-157.

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

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