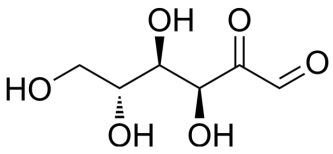
2-Keto-D-Glucose

Cat. No.:	HY-113629
CAS No.:	1854-25-7
Molecular Formula:	$C_6H_{10}O_6$
Molecular Weight:	178.14
Target:	Drug Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



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[1][2].
In Vitro	Pyrroloquinoline 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[3]. 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.

[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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