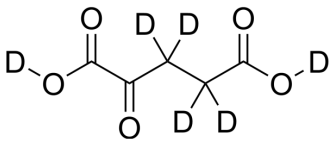
2-Ketoglutaric acid-d_6

Cat. No.:	HY-W013636S2
CAS No.:	1173021-86-7
Molecular Formula:	$C_5D_6O_5$
Molecular Weight:	152.14
Target:	Tyrosinase; Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	2-Ketoglutaric acid-d_6 is the deuterium labeled 2-Ketoglutaric acid[1]. 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)[2].
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216.

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

[3]. 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 Dec105(Pt 3):1654-1662.

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