L-2-Hydroxyglutaric acid

Cat. No.: HY-113039

CAS No.: 13095-48-2

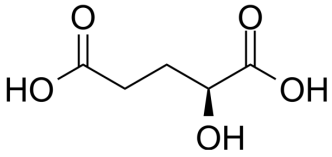
Molecular Formula: $C_5H_8O_5$

Molecular Weight: 148.11

Target: Endogenous Metabolite; Histone Demethylase; Mitochondrial Metabolism

Pathway: Metabolic Enzyme/Protease; Epigenetics

Storage: Solution, -20°C, 2 years



BIOLOGICAL ACTIVITY

Description	L-2-Hydroxyglutaric acid is an epigenetic modifier and putative oncometabolite in renal cancer. L-2-Hydroxyglutaric acid can inhibit histone demethylases and hence promote histone methylation[1]. L-2-Hydroxyglutaric acid inhibits mitochondrial creatine kinase (Mi-CK) activity with K_m and K_i of 2.52 mM and 11.13 mM, respectively[2].
IC_{50} & Target	Human Endogenous Metabolite
In Vitro	L-2-Hydroxyglutaric acid is potent at inhibiting 2-oxoglutarate (2-OG) dependent dioxygenases (2OGDs) including the Ten Eleven Translocation (TET) enzymes[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Shim EH, et al. L-2-Hydroxyglutarate: an epigenetic modifier and putative oncometabolite in renal cancer. Cancer Discov. 2014 Nov;4(11):1290-8.

[2]. da Silva CG, et al. L-2-hydroxyglutaric acid inhibits mitochondrial creatine kinase activity from cerebellum of developing rats. Int J Dev Neurosci. 2003 Jun;21(4):217-24.

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