

## **Product** Data Sheet

# Acetoacetic acid

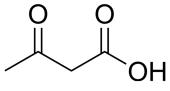
Cat. No.: HY-112540 CAS No.: 541-50-4 Molecular Formula:  $C_4H_6O_3$  Molecular Weight: 102.09

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage: Please store the product under the recommended conditions in the Certificate of

Analysis.



### **BIOLOGICAL ACTIVITY**

| Description               | Acetoacetic acid is an endogenous metabolite present in Cerebrospinal_Fluid and Blood that can be used for the research of Meningitis, Pregnancy, 3 Hydroxy 3 Methylglutaryl CoA Lyase Deficiency, Preeclampsia/Eclampsia, Diabetes Mellitus Type 2, Glucose Transporter Type 1 Deficiency Syndrome and Succinyl CoA:3 Oxoacid CoA Transferase Deficiency <sup>[1][2][3][4][5][6][7]</sup> .                                   |
|---------------------------|--|
| IC <sub>50</sub> & Target | Human Endogenous Metabolite  |
| In Vitro                  | Endogenous metabolites is defined as those that are annotated by Kyoto Encyclopedia of Genes and Genomes as substrates or products of the $\sim$ 1900 metabolic enzymes encoded in our genome. It is clear in the body of literature that there are documented toxic properties for many of these metabolites <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

### **CUSTOMER VALIDATION**

- J Nanobiotechnology. 2022 Mar 9;20(1):120.
- J Leukoc Biol. 2023 Mar 31;qiad035.

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#### **REFERENCES**

- [1]. Subramanian A, et al. Proton MR CSF analysis and a new software as predictors for the differentiation of meningitis in children. NMR Biomed. 2005 Jun;18(4):213-25.
- $[2]. \ Bahado-Singh RO, et al. \ Metabolomics and first-trimester prediction of early-onset preeclampsia. \ J \ Matern Fetal \ Neonatal \ Med. \ 2012 \ Oct; 25(10):1840-7.$
- [3]. Morris AA, et al. Hepatic mitochondrial 3-hydroxy-3-methylglutaryl-coenzyme a synthase deficiency. Pediatr Res. 1998 Sep;44(3):392-6.
- [4]. Tasker RC, et al. Hyperventilation in severe diabetic ketoacidosis. Pediatr Crit Care Med. 2005 Jul;6(4):405-11.
- $[5]. \ Klepper\ J,\ et\ al.\ Effects\ of\ the\ ketogenic\ diet\ in\ the\ glucose\ transporter\ 1\ deficiency\ syndrome.\ Prostaglandins\ Leukot\ Essent\ Fatty\ Acids.\ 2004\ Mar; 70(3):321-7.$
- [6]. Snyderman SE, et al. Succinyl-CoA:3-ketoacid CoA-transferase deficiency. Pediatrics. 1998 Apr;101(4 Pt 1):709-11.

| 7]. Lee N, et al. Endogenous to | coxic metabolites and implications in cancer therapy. Oncogene. 2020 Aug;39(35):5709-5720.   |  |
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|                                 | Caution: Product has not been fully validated for medical applications. For research use only.   |  |
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