

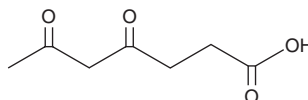
PRODUCT INFORMATION



Succinylacetone

Item No. 25501

CAS Registry No.: 51568-18-4
Formal Name: 4,6-dioxo-heptanoic acid
Synonym: NSC 174804
MF: $C_7H_{10}O_4$
FW: 158.2
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 272 nm
Supplied as: A crystalline solid
Storage: $-20^\circ C$
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Succinylacetone is supplied as a crystalline solid. A stock solution may be made by dissolving the succinylacetone in water. The solubility of succinylacetone in water is approximately 25 mg/ml. Succinylacetone is slightly soluble in DMSO, chloroform, and methanol. We do not recommend storing the aqueous solution for more than one day.

Description

Succinylacetone is an inhibitor of δ -aminolevulinic acid dehydratase ($K_i = 300$ nM for human erythrocyte enzyme).¹ It inhibits heme biosynthesis and decreases the growth of murine erythroleukemia cells when used at concentrations of 0.1 and 1 mM.² Succinylacetone is an abnormal metabolite of tyrosine that accumulates in hereditary tyrosinemia type I, a disorder characterized by a deficiency in fumarylacetoacetate hydrolase (FAH), the final enzyme in tyrosine catabolism.³ Without functional FAH, fumarylacetoacetate is converted into succinylacetone. In a rat model of hypertyrosinemia, succinylacetone (40 mg/kg twice daily) increases levels of δ -aminolevulinic acid in urine, decreases heme levels in liver, kidney, spleen, and vascular tissues, and reduces sensitivity of isolated rat aortic rings to endothelium-dependent and -independent vasodilation. Increased blood levels of succinylacetone have been used as a marker of tyrosinemia type 1.⁴

References

1. Sassa, S. and Kappas, A. *J. Clin. Invest.* **71**(3), 625-634 (1983).
2. Ebert, P.S., Hess, R.A., Frykholm, B.C., *et al.* *Biochem. Biophys. Res. Commun.* **88**(4), 1382-1390 (1979).
3. Moore, M.E., Koenig, A.E., Hilgartner, M.A., *et al.* *Metab. Brain Dis.* **32**(6), 1829-1841 (2017).
4. Stinton, C., Geppert, J., Greeman, K., *et al.* *Orphanet J. Rare Dis.* **12**(1), 48 (2017).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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