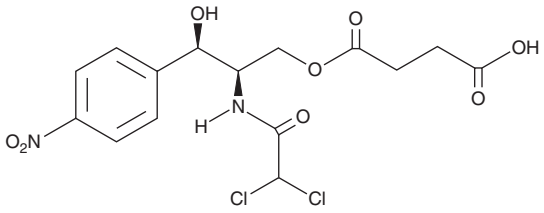
PRODUCT INFORMATION

Chloramphenicol Succinate

Item No. 25453

CAS Registry No.: 3544-94-3
Formal Name: butanedioic acid, mono[(2R,3R)-2-[(dichloroacetyl)amino]-3-hydroxy-3-(4-nitrophenyl)propyl] ester
MF: $C_{15}H_{16}Cl_2N_2O_8$
FW: 423.2
Purity: ≥99%
UV/Vis.: λ_{max}: 273 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Chloramphenicol succinate is supplied as a solid. A stock solution may be made by dissolving the chloramphenicol succinate in the solvent of choice, which should be purged with an inert gas. Chloramphenicol succinate is soluble in ethanol, methanol, DMSO, and dimethyl formamide. We do not recommend storing the aqueous solution for more than one day.

Description

Chloramphenicol succinate is a water-soluble prodrug form of the antibiotic chloramphenicol.[1] It is a substrate for succinate dehydrogenase (SDH) and is oxidized by human liver and rat liver and kidney mitochondria to release chloramphenicol *in vitro*.[2] Chloramphenicol succinate reduces human leukocyte migration *in vitro*.[3] *In vivo*, chloramphenicol succinate reduces *E. coli* growth in rabbit and rat models of pyelonephritis when administered at doses of 150 and 200 mg/kg, respectively.[4] Chloramphenicol succinate (20 mg/kg) reduces infarct size in a porcine model of myocardial ischemia-reperfusion injury.[5] Formulations containing chloramphenicol succinate have been used in the treatment of severe bacterial infections.

References

1. Ceriotti, G., Defranceschi, A., De Carneri, I., *et al*. Chloramphenicol succinate, a water-soluble derivative of chloramphenicol. *Farmaco Sci.* **9(1)**, 21-38 (1954).
2. Ambekar, C.S., Lee, J.S., Cheung, B.M., *et al*. Chloramphenicol succinate, a competitive substrate and inhibitor of succinate dehydrogenase: Possible reason for its toxicity. *Toxicol. In Vitro* **18(4)**, 441-447 (2004).
3. Forsgren, A. and Schmeling, D. Effect of antibiotics of chemotaxis of human leukocytes. *Antimicrob. Agents Chemother.* **11(4)**, 590-584 (1977).
4. Prat, V., Konickova, L., Ritzerfeld, W., *et al*. Effect of chloramphenicol against different E. coli strains in vitro and in experimental pyelonephritis. *Arzneimittelforschung* **18(9)**, 1123-1127 (1968).
5. Sala-Mercado, J.A., Wider, J., Undyala, V.V., *et al*. Profound cardioprotection with chloramphenicol succinate in the swine model of myocardial ischemia-reperfusion injury. *Circulation* **122(11 Suppl)**, S179-S184 (2010).

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