

Lactate potassium

Chemical Properties

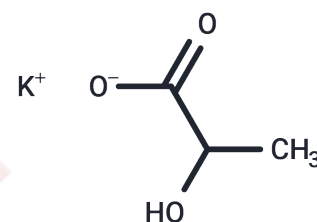
CAS No. : 996-31-6

Formula: C₃H₅KO₃

Molecular Weight: 128.17

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

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|---------------|---|
| Description | Lactate potassium inhibits bacterial growth and serves as a pH regulator and preservative. |
| Targets(IC50) | Antibacterial |
| In vitro | In Uveal melanoma 92.1 cells, Lactate potassium (20 mM, 24 and 48 hours) inhibited cell proliferation and migration, and shifted cellular metabolism towards oxidative phosphorylation [1]. Lactate potassium (20 mM, 24 hours) significantly increased the protein expression levels of MCT1 and HCAR1, as well as markedly elevated the mRNA expression levels of SLC16A1 and HCAR1 [1]. |
| In vivo | Lactate potassium (1.6 g/kg, pH 7.4, subcutaneous injection, once daily, days 8 to 30) inhibits CD8+ T cell-dependent tumor growth in female C57BL/6 mice bearing MC38 colon carcinoma cells [2]. |

Solubility Information

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|------------|--|
| Solubility | H ₂ O: 40.00 mg/mL (312.09 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
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Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|-----------|------------|------------|
| 1 mM | 7.8021 mL | 39.0107 mL | 78.0214 mL |
| 5 mM | 1.5604 mL | 7.8021 mL | 15.6043 mL |
| 10 mM | 0.7802 mL | 3.9011 mL | 7.8021 mL |
| 50 mM | 0.156 mL | 0.7802 mL | 1.5604 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Lucia Longhitano, et al. Lactate Rewrites the Metabolic Reprogramming of Uveal Melanoma Cells and Induces Quiescence Phenotype. *Int J Mol Sci.* 2022 Dec 20;24(1):24.

Qiang Feng, et al. Lactate increases stemness of CD8 + T cells to augment anti-tumor immunity. *Nat Commun.* 2022 Sep 6;13(1):4981.

Sallam KI. Antimicrobial and antioxidant effects of sodium acetate, sodium lactate, and sodium citrate in refrigerated sliced salmon. *Food Control.* 2007 May;18(5):566-575.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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