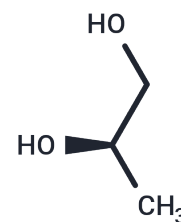


## (R)-(-)-1,2-Propanediol

## Chemical Properties

CAS No. :	4254-14-2
Formula:	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>
Molecular Weight:	76.09
Storage:	Keep away from moisture Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



## Biological Description

Description	(R)-(-)-1,2-Propanediol is a chiral isomer of 1,2-propanediol and serves as a key chiral starting material for the synthesis of chiral drugs, fine chemicals, and functional polymers; it acts as an agonist for TRPM8 in FLIPR assays (EC <sub>50</sub> = 2.2 μM).
Targets(IC50)	Others
In vitro	(R)-(-)-1,2-Propanediol can be efficiently produced by engineered E. coli or Lactococcus lactis. In E. coli, NADH-linked glycerol dehydrogenase converts glucose/glycerol to high-purity (R)-isomers. Comparative production of (R)- and (S)-isomers across strains provides kinetic and genetic insights for industrial bio-production [1][2].

## Solubility Information

Solubility	DMSO: 80 mg/mL (1051.39 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	13.1423 mL	65.7117 mL	131.4233 mL
5 mM	2.6285 mL	13.1423 mL	26.2847 mL
10 mM	1.3142 mL	6.5712 mL	13.1423 mL
50 mM	0.2628 mL	1.3142 mL	2.6285 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

N E Altaras, et al. Metabolic engineering of a 1,2-propanediol pathway in Escherichia coli. Appl Environ Microbiol. 1999 Mar;65(3):1180-5.

Sato R, et al. Production of R- and S-1,2-propanediol in engineered Lactococcus lactis. AMB Express. 2021 Aug 16; 11(1):117.

(R)-(-)-1,2-propanediol compositions and methods. US20150105349 A1. Google Patents. August 19, 2013.

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