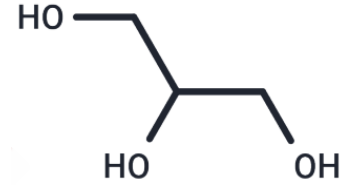


Glycerol

#Cat: NB-64-29018-100mL Size: 100 ml

Chemical Properties:

CAS No: 56-81-5
Formula: C₃H₈O₃
Molecular Weight: 92.09
Appearance: no data available
Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description:

Description	<p>Glycerol or glycerin is a colourless, odourless, viscous liquid that is sweet-tasting and mostly non-toxic. It is widely used in the food industry as a sweetener and humectant and in pharmaceutical formulations. Glycerol is an important component of triglycerides (i.e. fats and oils) and of phospholipids. Glycerol is a three-carbon substance that forms the backbone of fatty acids in fats. When the body uses stored fat as a source of energy, glycerol and fatty acids are released into the bloodstream. The glycerol component can be converted into glucose by the liver and provides energy for cellular metabolism. Normally, glycerol shows very little acute toxicity and very high oral doses or acute exposures can be tolerated. On the other hand, chronically high levels of glycerol in the blood are associated with glycerol kinase deficiency (GKD). GKD causes the condition known as hyperglycerolemia, an accumulation of glycerol in the blood and urine. There are three clinically distinct forms of GKD: infantile, juvenile, and adult. The infantile form is the most severe and is associated with vomiting, lethargy, severe developmental delay, and adrenal insufficiency. The mechanisms of glycerol toxicity in infants are not known, but it appears to shift metabolism towards chronic acidosis. Acidosis typically occurs when arterial pH falls below 7.35. In infants with acidosis, the initial symptoms include poor feeding, vomiting, loss of appetite, weak muscle tone (hypotonia), and lack of energy (lethargy). These can progress to heart, liver, and kidney abnormalities, seizures, coma, and possibly death. These are also the characteristic symptoms of untreated GKD. Many affected children with organic acidemias experience intellectual disability or delayed development. Patients with the adult form of GKD generally have no symptoms and are often detected fortuitously.</p>
Targets (IC50)	<p>Endogenous Metabolite</p>

Solubility Information:

Solubility	<p>H₂O: >500 mg/mL, Sonication is recommended. DMSO: 300 mg/mL (3257.68 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)</p>
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	10.8589 mL	54.2947 mL	108.5894 mL
5 mM	2.1718 mL	10.8589 mL	21.7179 mL
10 mM	1.0859 mL	5.4295 mL	10.8589 mL
50 mM	0.2172 mL	1.0859 mL	2.1718 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.

Reference

Sweatman B C , Farrant R D , Holmes E , et al. 600 MHz ¹H-NMR spectroscopy of human cerebrospinal fluid: effects of sample manipulation and assignment of resonances.[J]. Journal of Pharmaceutical & Biomedical Analysis, 1993, 11(8):651-64.

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