

Potassium iodide

Chemical Properties

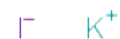
CAS No. : 7681-11-0

Formula: IK

Molecular Weight: 166.01

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

Description	Potassium iodide is used as the treatment of overactive thyroid and as protection of the thyroid gland from the influences of radiation from swallowed or inhaled radioactive iodine. It may be used after accidental exposure to radioactive iodine or before and after administration of medicine containing radioactive iodine.
Targets(IC50)	Tyrosinase
In vitro	Iodine induces abnormal morphologic changes of cells, inhibited cell proliferation, and increases apoptosis rate in rat aorta endothelial cells. Iodine also reduces the activity of SOD, GSH-Px, and concentrations of GSH and increases the concentrations of MDA and protein carbonyl in a dose-dependent manner. Excess iodine decreased the activity of eNOS and increased the activity of iNOS and the expression of ICAM-1 and VCAM-1 in culture medium. Excess iodine exposure increases oxidative stress, causes damage of vascular endothelial cells, and altered the expression of adhesion factors and the activity of NOS. [1] Potassium iodide increases avidity of some immune reactions including C-mediated cell lysis mediated by altered access of C-binding receptors. [2] Potassium iodide (≥50 mM) increases lipid peroxidation in concentration-dependent manner. Potassium iodide (25 mM) reduces Fenton reaction-induced lipid peroxidation. [3] Potassium iodide is able to eliminate E faecalis from bovine root dentin when used with a 15-minute contact time. [4]
In vivo	Potassium Iodide decreases Schiff's bases (SB) concentrations in liver and lung homogenates after the administration of PTU but, unexpectedly, the level of SB increases in kidney homogenates of Wistar rats. [5]

Solubility Information

Solubility	H2O: 30 mg/mL (180.71 mM),Sonication is recommended. DMSO: 31 mg/mL (186.74 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	6.0237 mL	30.1187 mL	60.2373 mL
5 mM	1.2047 mL	6.0237 mL	12.0475 mL
10 mM	0.6024 mL	3.0119 mL	6.0237 mL
50 mM	0.1205 mL	0.6024 mL	1.2047 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

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