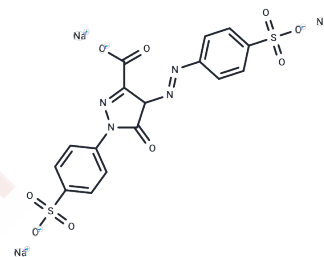


Tartrazine

Chemical Properties

CAS No. :	1934-21-0
Formula:	C ₁₆ H ₉ N ₄ Na ₃ O ₉ S ₂
Molecular Weight:	534.36
Storage:	Keep away from direct sunlight Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	Tartrazine (Acid Yellow 23) is a food additive that belongs to a class of artificial dyes and contains an azo group; it has significant genotoxic effect, may be harmful to health and its prolonged use could trigger carcinogenesis.
Targets(IC50)	Apoptosis,Others,Mitochondrial Metabolism
In vitro	We assessed the cytotoxicity of Tartrazine by 3-(4,5-Dimethyl-2-thiazolyl)-2,5-diphenyl-2H-tetrazolium bromide test and the response of DNA repair through comet assay (alkaline version). We used different concentrations of the dye, ranging from 0.25-64.0 mM. The results demonstrated that Tartrazine has no cytotoxic effects. However, this dye had a significant genotoxic effect at all concentrations tested. Although most of the damage was amenable to repair, some damage remained higher than positive control after 24 h of repair[2]

Solubility Information

Solubility	DMSO: 49.5 mg/mL (92.63 mM),Sonication is recommended. H ₂ O: 45 mg/mL (84.21 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 2 mg/mL (3.74 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8714 mL	9.357 mL	18.714 mL
5 mM	0.3743 mL	1.8714 mL	3.7428 mL
10 mM	0.1871 mL	0.9357 mL	1.8714 mL
50 mM	0.0374 mL	0.1871 mL	0.3743 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

Rovina K, Siddiquee S, Shaarani SM. A Review of Extraction and Analytical Methods for the Determination of Tartrazine (E 102) in Foodstuffs. Crit Rev Anal Chem. 2017 Jul 4;47(4):309-324. doi: 10.1080/10408347.2017.1287558. Epub 2017 Jan 27.

Effects on DNA repair in human lymphocytes exposed to the food dye tartrazine yellow. Anticancer Res. 2015 Mar; 35(3):1465-74.

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