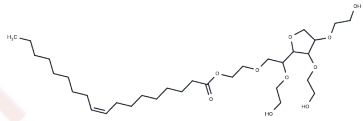
Data Sheet (Cat.No.T13947)

TargetMol

Tween 80

Chemical Properties



CAS No. : 9005-65-6

Formula: C32H60O10

Molecular Weight: 604.822

Storage: Keep away from direct sunlight
-20°C for 2 years, 4°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Tween 80 is a nonionic surfactant and emulsifier that reduces bacterial adherence and inhibits biofilm formation. Tween 80 is widely used as a co-solvent in pharmacology experiments because of its ability to enhance the solubility of compounds in the aqueous phase.
Targets(IC50)	Others
In vitro	**METHODS**: S. aureus, L. monocytogenes, and P. fluorescens were treated with Tween 80 (0.1% (v/v) in TSB), and growth curves were documented by measuring optical densities at OD600 every 20 min. **RESULTS**: Tween 80 increased the growth rate of S. aureus. tween 80 did not affect the growth of L. monocytogenes. the growth rate of the P. fluorescens tween 80 group was initially higher than that of the control group, but then declined again, with the maximum OD significantly lower than that of the control. [1]
In vivo	**METHODS**: To study the effect of solvents on locomotor activity in mice, Tween-80/Tween-20 (4%-64% (v/v) in saline) was administered intraperitoneally as a single injection to (BALB/c * DBA/2) F1 mice, and the locomotor activity was monitored for 12 h after the administration. **RESULTS**: Tween-80 significantly decreased the locomotor activity of mice at a concentration of 32%, while Tween-20 significantly decreased the locomotor activity of mice at a concentration of 16%. [2] **METHODS**: To detect anti-tumor activity in vivo, ATL (15-30 mg/kg in 5% DMSO + 30% PEG300 + 10% Tween 80 + 55% PBS) was injected intraperitoneally into BALB/c mice harboring human thyroid carcinoma tumor 8505C once daily for nine weeks. **RESULTS**: ATL inhibited the growth of 8505C cell xenografts in vivo. [3]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.6534 mL	8.2669 mL	16.5338 mL
5 mM	0.3307 mL	1.6534 mL	3.3068 mL
10 mM	0.1653 mL	0.8267 mL	1.6534 mL
50 mM	0.0331 mL	0.1653 mL	0.3307 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

Nielsen CK, et al. Effects of Tween 80 on Growth and Biofilm Formation in Laboratory Media. Front Microbiol. 2016 Nov 22;7:1878.
Hu Y, Wen Q, Cai Y, et al. Alantolactone induces concurrent apoptosis and GSDME-dependent pyroptosis of anaplastic thyroid cancer through ROS mitochondria-dependent caspase pathway. Phytomedicine. 2022: 154528.
Castro CA, et al. Behavioral effects of vehicles: DMSO, ethanol, Tween-20, Tween-80, and emulphor-620. Pharmacol Biochem Behav. 1995 Apr;50(4):521-6.
Yang D, Fan Y, Xiong M, et al.Loss of renal tubular G9a benefits acute kidney injury by lowering focal lipid accumulation via CES1.EMBO reports.2023: e56128.
Guo Y, Zhu L, Duan Y, et al.Ruxolitinib induces apoptosis and pyroptosis of anaplastic thyroid cancer via the transcriptional inhibition of DRP1-mediated mitochondrial fission.Cell Death & Disease.2024, 15(2): 125.
Hu Y, et al. Alantolactone induces concurrent apoptosis and GSDME-dependent pyroptosis of anaplastic thyroid cancer through ROS mitochondria-dependent caspase pathway. Phytomedicine. 2023 Jan;108:154528.