

Fenoprofen

Chemical Properties

CAS No. :	29679-58-1
Formula:	C ₁₅ H ₁₄ O ₃
Molecular Weight:	242.27
Storage:	Store at low temperature Pure form: -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	Fenoprofen (LILLY-5385) is a non-steroidal anti-inflammatory compound and a modifier enhancer of the melanocortin receptor, which increases ERK1/2 activation, inhibits biofilm formation, and alters biofilm structure, and is used in the treatment of acute pain and chronic arthritis.
Targets(IC50)	ERK,Melanocortin Receptor,COX

Solubility Information

Solubility	DMSO: 80 mg/mL (330.21 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (13.62 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	4.1276 mL	20.6381 mL	41.2763 mL
5 mM	0.8255 mL	4.1276 mL	8.2553 mL
10 mM	0.4128 mL	2.0638 mL	4.1276 mL
50 mM	0.0826 mL	0.4128 mL	0.8255 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

Rezaei T, et al. A universal methodology for reliable predicting the non-steroidal anti-inflammatory drug solubility in supercritical carbon dioxide. *Sci Rep.* 2022 Jan 20;12(1):1043.

Yuan XC, et al. Fenoprofen-An Old Drug Rediscovered as a Biased Allosteric Enhancer for Melanocortin Receptors. *ACS Chem Neurosci.* 2019 Mar 20;10(3):1066-1074.

Nakata K. [Development of novel methods for preparing chiral non-steroidal anti-inflammatory drugs (NSAIDs) by asymmetric esterification]. *Yakugaku Zasshi.* 2012;132(9):993-1000. Review. Japanese. PubMed PMID: 23023415.

Holland S, Silberstein SD, Freitag F, Dodick DW, Argoff C, Ashman E; Quality Standards Subcommittee of the American Academy of Neurology and the American Headache Society. Evidence-based guideline update: NSAIDs and other complementary treatments for episodic migraine prevention in adults: report of the Quality Standards Subcommittee of the American Academy of Neurology and the American Headache Society. *Neurology.* 2012 Apr 24;78(17):1346-53. doi: 10.1212/WNL.0b013e3182535d0c. Review. PubMed PMID: 22529203; PubMed Central PMCID: PMC3335449.

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