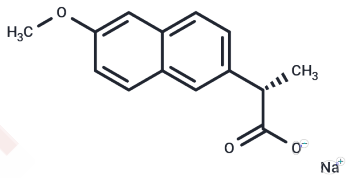
Data Sheet (Cat.No.T1582L)

TargetMol

Naproxen sodium

Chemical Properties



CAS No. : 26159-34-2

Formula: C14H13NaO3

Molecular Weight: 252.24

Storage: Store under nitrogen
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	Naproxen sodium (Anaprox) is a COX inhibitor for COX-1 and COX-2 with analgesic and antipyretic properties.
Targets(IC50)	Autophagy,COX
In vitro	In rat models of carrageenan-induced arthritis and attenuation of pain perception (IC50=27 μM) as well as yeast-induced fever (IC50=40 μM), Naproxen exhibits inhibitory effects. Additionally, in rats, Naproxen suppresses the production of PGE2 (IC50=12.8 μM) and TXB2 (IC50=5.9 μM) triggered by lipopolysaccharides.
In vivo	In HCA-7 colon cancer cells (IC50=1.45 mM), high concentrations of Naproxen induce apoptosis. Within cells, Naproxen inhibits COX-1 (IC50=2.2 μg/mL) and COX-2 (IC50=1.3 μg/mL).
Kinase Assay	COX-1 and COX-2 activities in intact cells: For the determination of COX-1 and COX-2 inhibition, bovine aortic endothelial cells (BAEC) are incubated for 30 minutes with Naproxen (0.1 ng/mL to 1 mg/mL), and cultured J774.2 macrophages are treated with endotoxin at 1 μg/mL for 12 hours to induce COX-2 followed by incubated for 30 minutes with Naproxen (0.1 ng/mL to 1 mg/mL), respectively. Arachidonic acid (30 μM) is then added, and the cells are incubated for a further 15 minutes at 37 °C. The medium is then removed, and radioimmunoassay is used to measure the formation of 6-keto-PGF1α, PGE2, thromboxane B2, or PGF2α for the assessment of IC50 for COX-1 and COX-2.
Cell Research	Cells are exposed to Naproxen for 24 and 48 hours, respectively. At the end of incubation, cells are harvested by trypsinization, stained with trypan blue solution (0.04% wt/vol) and counted in a Neubauer haemocytometer chamber for the determination of cell viability.(Only for Reference)

Solubility Information

Solubility	DMSO: 4.55 mg/mL (18.04 mM),Sonication is recommended. H2O: 198.2 mM,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.9645 mL	19.8224 mL	39.6448 mL
5 mM	0.7929 mL	3.9645 mL	7.929 mL
10 mM	0.3964 mL	1.9822 mL	3.9645 mL
50 mM	0.0793 mL	0.3964 mL	0.7929 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

Mitchell JA, et al. Proc Natl Acad Sci, 1993, 90(24), 11693-11697.
Huntjens DR, et al. Br J Pharmacol, 2006, 148(4), 396-404.
Grossman CJ, et al. Inflamm Res, 1995, 44(6), 253-257.
Tavolari S, et al. Carcinogenesis, 2008, 29(2), 371-380.
Krekels EH, et al. Pharm Res, 2011, 28(7), 1561-1576.