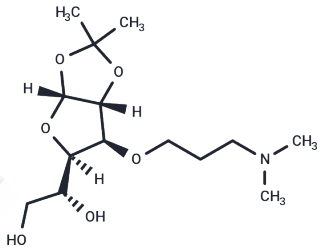
Data Sheet (Cat.No.T25080)

TargetMol

Amiprilose

Chemical Properties



CAS No. : 56824-20-5

Formula: C14H27NO6

Molecular Weight: 305.37

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Amiprilose (SM 1213) has anti-inflammatory activity and inhibits the proliferation of a variety of hyperproliferative cell types.Amiprilose induces lymphokine-induced macrophage activation and may be used in studies of rheumatoid arthritis and psoriasis.
Targets(IC50)	Antibacterial
In vitro	Low concentrations of Amiprilose hydrochloride (1-100 μg/ml) stimulated proliferation of mouse thymocytes and enhanced IL-1-stimulated proliferative responses in human synovial fibroblasts.[1];In all three models, Amiprilose hydrochloride at concentrations of 0.1% (w/v) or less was not toxic to fibroblasts and keratinocytes and did not interfere with the differentiation of skin equivalents and developing skin equivalents. When tested in skin equivalents, Amiprilose hydrochloride concentrations between 0.1% and 0.5% resulted in altered fibroblast morphology with large intracellular vacuoles, and concentrations above 5% were toxic. In mature skin equivalents, Amiprilose hydrochloride at concentrations of 1% to 10% affected the epidermis in addition to changes in fibroblast morphology. During differentiation, epidermal keratinocytes are also affected when 0.5% Amiprilose hydrochloride is present in developing skin equivalents.[2]
In vivo	In 8 consecutive experiments, 90 Louvain (LOU) rats and 91 Sprague-Dawley (SD) rats were immunized with chick type II collagen and administered amiprilose HCl aqueous (1 mg/mL). In LOU rats, the incidence of arthritis was 7/46 (15%) in the amiprilose HCl group compared with 16/44 (36%) in the aqueous group (P less than 0.01). In SD rats, the incidence of arthritis was 28/46 (60%) in the experimental group and 33/45 (73%) in the control group (p greater than NS), but the incidence of arthritis was significantly lower in the experimental group on days 16 and 21 (p less than 0.03). In the LOU assay, amiprilose HCl did not affect antibody titers or delayed hypersensitivity to collagen, nor did it affect the distribution of T cell subsets. At a nontoxic concentration of 1 mg/mL, amiprilose HCl reduced 3H thymidine incorporation in cultured rabbit synovial fibroblasts by 78% and resulted in the presence of numerous intracytoplasmic granules/vacuoles. amiprilose HCl system also reduced prostaglandin E2 levels in rabbit synovial cell supernatant in a dose-related manner by as much as 73% without affecting collagenase activity. collagenase activity.[5]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2747 mL	16.3736 mL	32.7472 mL
5 mM	0.6549 mL	3.2747 mL	6.5494 mL
10 mM	0.3275 mL	1.6374 mL	3.2747 mL
50 mM	0.0655 mL	0.3275 mL	0.6549 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

Chang DM,et al.Immunoregulatory effects of a synthetic monosaccharide. Immunopharmacol Immunotoxicol. 1995 Aug;17(3):437-50.
Hevelone JC, et al. Effects of amiprilose hydrochloride on the components of human skin equivalents. In Vitro Cell Dev Biol. 1991 May;27A(5):387-96.
Linhardt RJ,et al. Structure of amiprilose hydrochloride, a novel anti-inflammatory agent. J Pharm Sci. 1990 Feb;79 (2):158-62.
Caldwell JR, et al.Flare during drug withdrawal as a method to support efficacy in rheumatoid arthritis: amiprilose hydrochloride as an example in a double blind, randomized study. J Rheumatol. 1998 Jan;25(1):30-5.
Kieval RI,et al. Evaluation of a modified hexose sugar, amiprilose hydrochloride, in experimental models of synovitis. J Rheumatol. 1989 Jan;16(1):67-74.