

ACA-28

Chemical Properties

CAS No. : 948044-25-5

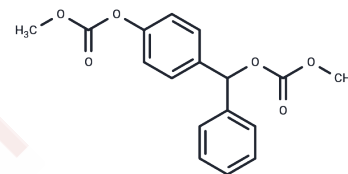
Formula: C17H16O6

Molecular Weight: 316.31

Store at low temperature

Storage: 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	ACA-28 is an ERK MAPK signalling modulator that induces apoptosis in melanoma cells by overexpressing ERK. Its IC ₅₀ values for melanoma cells (SK-MEL-28) and normal melanocytes (NHEM) are 5.3 and 10.1 μM respectively.
Targets(IC50)	Apoptosis,ERK
In vitro	Methods: A4-15 cells were treated with ACA-28 (0-10μM), and cell proliferation and related protein expression levels were measured using WST-8 and Western blot. Result: ACA-28 selectively downregulated DUSP6 and inhibited the growth of A4-15 cells. [2]

Solubility Information

Solubility	DMSO: 80 mg/mL (252.92 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 (10.43 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	3.1615 mL	15.8073 mL	31.6146 mL
5 mM	0.6323 mL	3.1615 mL	6.3229 mL
10 mM	0.3161 mL	1.5807 mL	3.1615 mL
50 mM	0.0632 mL	0.3161 mL	0.6323 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

Satoh R, et al. Discovery of new benzhydrol biscarbonate esters as potent and selective apoptosis inducers of human melanomas bearing the activated ERK pathway: SAR studies on an ERK MAPK signaling modulator, ACA-28. *Bioorg Chem.* 2020 Oct;103:104137.

Kanda Y, et al. Down-regulation of dual-specificity phosphatase 6, a negative regulator of oncogenic ERK signaling, by ACA-28 induces apoptosis in NIH/3T3 cells overexpressing HER2/ErbB2. *Genes Cells.* 2021 Feb;26(2):109-116.

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