

2-Acetylbenzoic acid

Chemical Properties

CAS No.:	577-56-0
Formula:	C ₉ H ₈ O ₃
Molecular Weight:	164.2
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

Biological Description

Description	2-Acetylbenzoic acid is more potent than 2-propionyloxybenzoic acid in inhibiting platelet function and platelet prostaglandin (PG) synthesis although the potencies of these agents were comparable in inhibiting prostacyclin (PGI ₂) synthesis.
Targets(IC ₅₀)	PGE: None
In vitro	<p>METHODS AND RESULTS: A series of benzoic acid derivatives was tested for specificity of action on human platelet function and platelet prostaglandin (PG) synthesis versus prostacyclin (PGI₂) production by rat and rabbit aorta rings. None of the agents tested was more specific for one system than the other. ASA was more potent than 2-propionyloxybenzoic acid (2-PBA) in inhibiting platelet function and platelet PG synthesis although the potencies of these agents were comparable in inhibiting PGI₂ synthesis. 3-Propionyloxybenzoic acid (3-PBA) caused increased activity in both systems while 2-Acetylbenzoic acid (ABA) had only minor effects. A cyclical derivative, 3-methylphthalide (3-MP), inhibited both platelet function and PGI₂ synthesis although it did not inhibit cyclo-oxygenase activity, suggesting a novel mechanism of action. CONCLUSIONS: Thus only minor changes in the ASA molecule could be effected without significant changes in pharmacological activity. The investigation of novel agents such as 3-MP may lead to a better understanding of arachidonate metabolism in different tissues and possibly to the development of more tissue-specific drugs.</p>

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	6.090 mL	30.451 mL	60.901 mL
5 mM	1.218 mL	6.090 mL	12.180 mL
10 mM	0.609 mL	3.045 mL	6.090 mL
50 mM	0.122 mL	0.609 mL	1.218 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Structure-activity studies of aspirin and related compounds on platelet aggregation, arachidonic acid metabolism in platelets and artery, and arterial prostacyclin activity. Prostaglandins Leukot Med. 1982 Jul;9(1):9-23.

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