Product Data Sheet

Product Name: O-Acetyl Salicylhydroxamic Acid
Cat. No.: GC14999

Chemical Properties

Cas. No.	199854-00-7		
Chemical Name	N-(acetyloxy)-2-hydroxy benzamide		
SMILES	CC(=O)ONC(=O)c1ccccc1O		
Formula	$C_9H_9NO_4$	M.Wt	195.2
Solubility	≤25mg/ml in ethanol;50mg/ml in DMSO;30mg/ml in dimethyl formamide	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Background

O-Acetyl Salicylhydroxamic Acid (O-ASHA) is an irreversible, non-selective inhibitor of COX-1 and COX-2 [1].

Cyclooxygenase (COX) is the key enzyme required for the conversion of arachidonic acid to prostaglandins. Cyclooxygenase enzymes have been involved in diverse physiological situations and disease processes ranging from inflammation to cancer. Until now, two cyclooxygenase isoforms have been identified, COX-1 and COX-2. The COX-1 enzyme is produced constitutively (i.e., gastric mucosa) and COX-2 is inducible (i.e., sites of inflammation) [2].

O-Acetyl Salicylhydroxamic Acid (O-ASHA) inhibited the activity of ovine COX-1 in a time-dependent and irreversible manner with a 50% B/B0 value of approximately 4.5 mM [1]. O-Acetyl Salicylhydroxamic Acid was a novel acetylating agent. O-Acetyl Salicylhydroxamic Acid inhibited PGE2 synthesis in vivo and blocked the cyclooxygenase

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

activity of PGHS in vitro. O-Acetyl Salicylhydroxamic Acid elicited its effects via acetylation of Ser-529 in the cyclooxygenase active site [1].

References:

[1] Loll P J, Sharkey C T, O'Connor S J, et al. O-acetylsalicylhydroxamic acid, a novel acetylating inhibitor of prostaglandin H2 synthase: structural and functional characterization of enzyme-inhibitor interactions[J]. Molecular pharmacology, 2001, 60(6): 1407-1413.

[2] Dubois R N, Abramson S B, Crofford L, et al. Cyclooxygenase in biology and disease[J]. The FASEB journal, 1998, 12(12): 1063-1073.

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