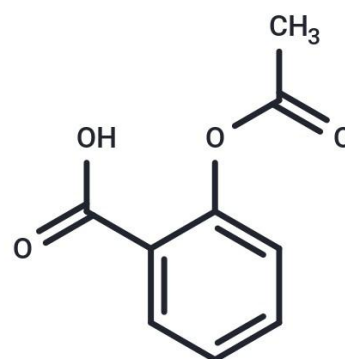


Aspirin(阿司匹林)(COX 抑制剂)

货号: RPM0028

◆ 产品信息

中文名称/Chinese Name:	Aspirin(阿司匹林)(COX 抑制剂)
别称/Synonyms:	Acetylsalicylate, Acetylsalicylic Acid, 阿司匹林, 邻乙酰水杨酸, ASA
CAS 号/CAS NO.:	50-78-2
化学式/Formula:	C ₉ H ₈ O ₄
分子量/M.Wt:	180.16
外观/Appearance:	固体
保存条件/Storage:	Powder: -20°C, 3 年 Insolvent: -80°C, 1 年



◆ 溶解信息

溶解度/Solubility:	10% DMSO+ 90% Saline:	1.8 mg/mL (9.99 mM), 现配现用
	H2O:	1.80 mg/mL (10 mM), 建议加热超声
	DMSO:	50 mg/mL (277.53 mM)

溶液配制参考/Preparing Stock Solutions:

	1 mg	5 mg	10 mg
1 mM	5.5506 mL	27.7531 mL	55.5062 mL
5 mM	1.1101 mL	5.5506 mL	11.1012 mL
10 mM	0.5551 mL	2.7753 mL	5.5506 mL
50 mM	0.111 mL	0.5551 mL	1.1101 mL

◆ 生物活性

产品描述/Description	Aspirin (Acetylsalicylic Acid) 是一种 COX 抑制剂, 抑制 COX1 和 COX2 (IC ₅₀ =5/210 μg/mL), 具有选择性、不可逆性和口服活性。Aspirin 也是一种组蛋白去乙酰化酶抑制剂, 可上调细胞周期阻滞蛋白 p21。Aspirin 具有抗炎、解热镇痛、抗血小板聚集等多种活性。
靶点活性/Targets (EC ₅₀)	Mitophagy, Virus Protease, COX, Autophagy
体外活性/In vitro	成骨细胞 MG-63 用 Aspirin (1-1000 μM) 处理 24 h, 使用 Flow cytometry

	检测细胞周期。结果显示 1、10、20 μM 剂量的 Aspirin 治疗 24 h 后, 对 MG-63 细胞周期无明显影响。然而, 在 100 和 1000 μM 的剂量下, G0/G1 期的细胞百分比显著增加。 ^[1]
体内活性/In vivo	方法: 为检测体内抗肿瘤活性, 将 Aspirin (100 mg/kg, 灌胃给药, 每天一次) 和 Cisplatin (3 mg/kg, 腹腔注射, 每三天一次) 给药给携带 LoVo 异种移植物的裸鼠, 持续 18 天。结果显示 Aspirin 与 Cisplatin 协同抑制结肠癌裸鼠移植瘤生长, 并且这些作用至少部分通过调节 PI3K-Akt、RAF-MEK-ERK 和 NF- κ B/COX-2 信号通路发挥。 ^[2]
细胞实验/Cell Research	We noted an increase of cell viability and proliferation with or without A β 1-42 peptide presence in aspirin treated cells. In addition, a decrease in apoptosis, determined by Caspase 3 activity and the expression of Cyt c and Smac/Diablo, were detected. Also, aspirin diminished necrosis process (LDH levels), pro-inflammatory mediators (IL- β and TNF- α) and NF- κ B protein expression, increasing anti-inflammatory PPAR- γ protein expression, preventing A β 1-42 toxic effects. Aspirin inhibited COX-2 and iNOS without changes in COX-1 expression, increasing anti-oxidant protein (Cu/Zn-SOD and Mn-SOD) expression in presence or absence of A β 1-42. Taken together, our results show that aspirin, at low doses increases cell viability by decreasing inflammation and oxidative stress, preventing the deleterious effects of the A β 1-42 peptide on astrocytes in primary culture. The use of low doses of aspirin may be more suitable for Alzheimer's disease. ^[3]

◆ 参考文献

[1] 2.De Luna-Bertos E, et al. Effect of aspirin on cell growth of human MG-63 osteosarcoma line. ScientificWorldJournal. 2012;2012:834246.

[2] Bi X, Yan X, Jiang B, et al. Indoprofen exerts a potent therapeutic effect against sepsis by alleviating high mobility group box 1-mediated inflammatory responses. Toxicology and Applied Pharmacology. 2021: 115778.

[3] Jorda A, Aldasoro M, Aldasoro C, Guerra-Ojeda S, Iradi A, Vila JM, Campos-Campos J, Valles SL. Action of low doses of Aspirin in Inflammation and Oxidative Stress induced by A β 1-42 on Astrocytes in primary culture. Int J Med Sci. 2020 Mar 13;17(6):834-843. doi: 10.7150/ijms.40959. PMID: 32218705; PMCID: PMC7085272.

◆ 注意事项

1. 请在收到本产品后立即按照说明书中推荐的条件保存, 使用前进行离心, 使粉末充分沉降于管底。
2. 请根据实验目的及本产品的溶解性, 选择相应的溶剂配制成高浓度母液后使用, 最佳工作浓度请参考相关文献通过实验摸索优化, 本说明书中的数据来源于公开文献, 仅供参考。
3. 本产品仅供科研使用, 不可用于诊断或治疗领域。
4. 为了您的安全和健康, 请穿实验服并戴一次性手套操作。