For Research Use Only

PD98059

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Catalog Number: CM05068

产品信息

Catalog Number:
CM05068

CAS号:
167869-21-8

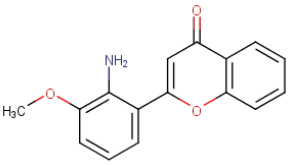
分子式:
$C_{16}H_{13}NO_3$

主要靶点:
ERK|MEK|Aryl Hydrocarbon Receptor|Autophagy

主要通路:
MAPK 信号通路|免疫与炎症|MAPK 信号通路|自噬

分子量:
267.28

溶解度:
10% DMSO+40% PEG300+5% Tween 80+45% Saline:0.67 mg/mL (2.51 mM);DMSO:13.75 mg/mL (51.44 mM);Ethanol:1.3 mg/mL (5 mM)



靶点活性

MEK2:50 μM (cell free)|MEK1:2 μM (cell free)

体外活性

方法：人乳腺癌细胞 MCF-7 和 MDA-MB-231 用 PD98059 (1-50 μM) 处理 12-72 h，使用 MTT 方法检测细胞活力。 **结果：**PD98059 剂量依赖性和时间依赖性抑制乳腺癌肿瘤细胞增强。[1] **方法：**多药耐药性肿瘤细胞 SMMC7721/ADM 和 BEL7402/ADM 用 PD98059 (2.5-20 μM) 处理 1 h，使用 Western Blot 方法检测靶点蛋白表达水平。 **结果：**PD98059 用剂量依赖性方式下调细胞中的 pERK1/2 表达率。[2]

体内活性

方法：为检测对非感染性休克的影响，将 PD98059 (10 mg/kg) 腹腔注射给酵母多糖诱导非感染性休克的 CD 小鼠。 **结果：**用 PD98059 治疗显著降低了酵母多糖引起的全身毒性、体重减轻和死亡率。[3] **方法：**为研究对实验性自身免疫性脑炎 (EAE) 的作用，将 PD98059 (5 mg/kg) 腹腔注射给 EAE 的 SJL/J 小鼠模型，每天一次，持续两周。 **结果：**PD98059 可以纠正 EAE 小鼠的免疫功能障碍，这与多种信号通路的调节同时发生。[4]

动物实验

Mice were randomized into 4 groups (n= 40 animals/group): (i) CAR + vehicle group. Mice were subjected to carrageenan-induced pleurisy and received the vehicle for PD98059 (10% dimethylsulfoxide (DMSO) (v/v) i.p. bolus 1 h after carrageen administration(N=10); (ii) PD98059 group. Same as the CAR + vehicle group but were administered PD98059 (10 mg/kg, i.p. bolus) 1 h after carrageenan administration (N=10); (iii) Sham+saline group. Sham-treated group in which identical surgical procedures to the CAR group were performed, except that the saline was administered instead of carrageenan (n=10); (iv) Sham+ PD98059 group. Identical to Sham+saline group except for the administration of PD98059 (10 mg/kg i.p. bolus) 1h after carrageenan administration of saline (N=10). The doses of PD98059 (10 mg/kg) used here were based on previous in vivo studies that demonstrated regulation of the inflammation process [4].

细胞实验

The MCF10A-Neo and MCF10A-NeoT lines were derived by transfection of the MCF10A cell line with the pHo6 plasmid and the pHo6 plasmid containing an Ha-ras oncogene derived from the human T24 bladder carcinoma cell line, and subsequent selection for resistance to G418. The transfected lines represent pooled survivors, as opposed to clonal lines. With the exception of the EGF content being increased from 10 to 20 ng/ml, the cells were cultured in supplemented Dulbecco's modified Eagle's medium/Ham's F-12 medium in a humidified atmosphere of 95% air/5% CO2 at 37°C. Subconfluent cultures were treated with varying concentrations of chemicals dissolved in DMSO (absolute volume of solvent < 0.1% of medium volume). Subconfluent cultures are treated with PD98059 (0-100 μM). Viability of cells after treatment was assessed by ability to exclude trypan blue. Cultures earmarked for RNA isolation were washed twice with phosphate-buffered saline (2.7 mM KCl, 1.5 mM KH2PO4, 137mM NaCl, 8 mM Na2HPO4, pH 7.2) at harvesting and stored at 280°C [2].

储存

Powder: -20°C for 3 years | In solvent: -80°C for 1 year | Shipping with blue ice.

For technical support and original validation data for this product please contact
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