For Research Use Only

Phorbol 12-myristate 13-acetate

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Catalog Number: CM00437

产品信息

Catalog Number:
CM00437

CAS号:
16561-29-8

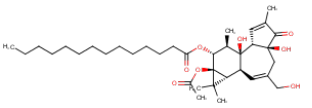
分子式:
$C_{36}H_{56}O_8$

主要靶点:
S1P Receptor|NF- κ B|PKC

主要通路:
细胞骨架|表观遗传|G 蛋白偶联受体|NF- κ B 信号通路

分子量:
616.83

溶解度:
H2O:Insoluble; DMSO:60 mg/mL (97.27 mM);



靶点活性

PKC:11.7 nM (EC50)

体外活性

方法：球体培养的人类黑色素瘤细胞 WM 系列用 Phorbol 12-myristate 13-acetate (50 ng/mL) 处理 3 天，使用 MTS 方法检测细胞生长情况。**结果：**Phorbol 12-myristate 13-acetate 促进黑色素瘤细胞增殖，WM35 细胞的细胞数提高到 265%。[1] **方法：**人单核白血球细胞 THP-1 用 Phorbol 12-myristate 13-acetate (200 ng/mL) 处理 1-5 天，使用光学显微镜评估形态，使用 Flow Cytometry 方法检测靶点表达。**结果：**Phorbol 12-myristate 13-acetate 诱导 THP-1 细胞分化为巨噬细胞样细胞 (THP-1 巨噬细胞)，CD11 和 CD14 的细胞表面表达增加。[2] **方法：**人静脉内皮细胞 HUVECs 用 Phorbol 12-myristate 13-acetate (10-40 ng/mL) 处理 8 h，使用 Wound healing migration assay 检测细胞迁移情况。**结果：**短期 Phorbol 12-myristate 13-acetate 处理可增强内皮细胞迁移。[3]

体内活性

方法：为研究佛波酯对啮齿类动物大脑发育的影响，将 Phorbol 12-myristate 13-acetate (100-500 μg/kg) 单次腹腔注射给药给缺乏 IL-18 或 IRAK-4 的新生大鼠和小鼠，24 h、7 天或14 天后处死动物。**结果：**Phorbol 12-myristate 13-acetate 在大脑中诱导炎症反应并引起广泛的神经退行性变。缺乏 IL-18 或 IRAK-4 对 Phorbol 12-myristate 13-acetate 诱导的脑损伤有保护作用。[4] **方法：**为构建急性小鼠耳炎症模型，将 Phorbol 12-myristate 13-acetate (20 μL 125 μg/mL PMA 丙酮溶液) 局部处理 CD-1 小鼠双耳，风干并完全吸收。**结果：**用 Phorbol 12-myristate 13-acetate 攻击的耳组织在施用约 2 小时开始出现炎症迹象，包括肿胀和发红。[5]

动物实验

All experiments are performed with male Wistar rats (weighing 250-280 g). One hundred and thirty-five Wistar rats are randomly divided into seven groups. (1) Rats in the sham group (n=21) are given a lateral cerebral ventricle injection of 0.9% normal saline; (2) Rats in the IR group (n=21) are given a lateral cerebral ventricle injection of 0.9% normal saline 30 min before middle cerebral artery occlusion (MCAO); (3) Rats in the Carbenoxolone (CBX) group (n=21) are given a lateral cerebral ventricle injection of CBX (5 μg/mL×10 μL) 30 min before MCAO; (4) Rats in the Sch-6783 group (n=21) are given a lateral cerebral ventricle injection of DZX (2 mM×30 μL) 30 min prior to MCAO; (5) Rats in the 5-HD group (n=21) are given a lateral cerebral ventricle injection of 5-HD (100 mM×10 μL), and after 10 min, DZX is injected 15 min prior to MCAO; (6) The rats in the DZX + Ro group (n=15) are given a lateral cerebral ventricle injection of DZX, and after 10 min, Ro-31-8425 (400 μg/kg) is injected 15 min prior to MCAO; (7) The rats in the 5-HD+PMA group (n=15) are given an intraperitoneal injection of PMA (200 μg/kg) after the injection of 5-HD and DZX [3].

细胞实验

α T3-1 and L β T-2 cells are grown in monolayer cultured in DMEM in humidified incubator 5% CO2 at 37°C. Serum starvation is with 0.1% FCS in the same medium for 16 h. GnRH and PMA are then added for the length of time as indicated. In general, α T3-1 cells are transiently transfected by ExGen 500 or by jetPRIME, while L β T2 cells only by jetPRIME transfection reagent. For experiments with dominant-negative (DN) PKCs, α T3-1 cells (in 6 cm plates) are transfected with 1.5 μg of p38 α -GFP with 3 μg of control vector, pCDNA3, or with 3 μg of the DN-PKCs constructs. For L β T2 cells, transfections are performed (in 10 cm plates) with 4 μg of p38 α -GFP along with 9 μg of control vector, pCDNA3, or with 9 μg of the DN-PKCs constructs. Approximately 30 h after transfection, the cells are serum-starved (0.1% FCS) for 16 h and later stimulated with GnRH or PMA, washed twice with ice-cold PBS, treated with the lysis buffer, followed by one freeze-thaw cycle. Cells are harvested; following centrifugation (15,000×g, 15 min, 4°C) supernatants are taken for immunoprecipitation experiments [2].

储存

keep away from direct sunlight,store under nitrogen,store at low temperature | Powder: -20°C for 3 years | In solvent: -80°C for 1 year | Shipping with blue ice.