

Catalog Number: CM00957

产品信息

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CM00957

CAS号:
147859-80-1

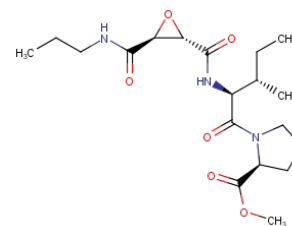
分子式:
C₁₉H₃₁N₃O₆

主要靶点:
Cysteine Protease

主要通路:
蛋白酶体

分子量:
397.47

溶解度:
Ethanol:73 mg/mL (183.66
mM);H₂O:< 1 mg/mL (insoluble
or slightly soluble);DMSO:65
mg/mL (163.53 mM)



体外活性

CA-074Me能够在活体HL-60细胞和血液形态的Trypanosoma brucei brucei中抑制cathepsin L, 但在没有硫醇的情况下不抑制cathepsin L. CA-074Me在细胞内酯酶的作用下转化为CA-074, 因此能在GSH耗尽的HL-60细胞中抑制cathepsin B. 建议在活细胞中选择性地抑制cathepsin B时使用CA-074而不是CA-074Me[1]。在CA074Me处理的成肌细胞中, 肌管大小和数量以及诱导的融合相关肌酸磷酸激酶活性和肌球蛋白重链蛋白水平减少了30至50%。这些减少也与剂量相关。CA074Me的微摩尔浓度能够抑制分化成肌细胞中的catB活性[2]。

体内活性

将CA074Me给药于伦敦APP小鼠, 可显著改善记忆缺失, 降低大脑中的淀粉样斑块负荷, 减少大脑中A β 40和A β 42的水平, 并且与未经治疗的对照动物相比, 减少由 β -分泌酶从APP裂解产生的C末端 β -分泌酶片段(CTF β)。在表达有Swe突变的 β -分泌酶位点的APP的小鼠(瑞典/伦敦APP小鼠)中, 它对这些参数没有影响。在体内通过脑室内给药CA074Me给正常的豚鼠, 可以大幅降低大脑中的A β 水平, 并抑制 β -分泌酶活性[3]。

细胞实验

HL-60 cells are pre-treated for 24 h with 200 μ M BSO followed by 60 min with 1 mM DEM. Thereafter, the cells(1 \times 10⁶/ml) are incubated with 100 μ M CA-074 or CA-074Me, in the presence of 1% DMSO, 200 μ M BSO and 1 mM DEM at 37°C. Control cultures are treated with 1% DMSO alone or with 100 μ M Z-FA-DMK in the presence of 200 μ M BSO and 1 mM DEM. Untreated HL-60 cells are incubated with 100 μ M CA-074 or CA-074Me, in the presence of 1% DMSO at 37°C. Untreated control cultures are incubated with 1% DMSO alone or with 100 μ M Z-FA-DMK. After 2 h incubation, cells are washed three times with PBS/1% glucose and lysed in 100 mM citrate, pH 5.0, 2% Chaps (10⁶ cells/100 μ l). Subsequently, the lysate is centrifuged and the clarified supernatant used to assay for proteolytic activity.(Only for Reference)

储存

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