

Product Data Sheet

Product Name: Pyrrophenone

Cat. No.: GC44794

Chemical Properties

Cas. No. 341973-06-6

SMILES FC(C=C1F)=CC=C1C(C2=CC=CC=C2C(N3[C@H])(CNC(C4=CC=C(/C=C5C(NC(S\5)=O)=O)C=C4)=O)C[C@@H](SC(C6=CC=CC=C6)(C7=CC=CC=C7)C8=CC=CC=C8)C3)=O)=O

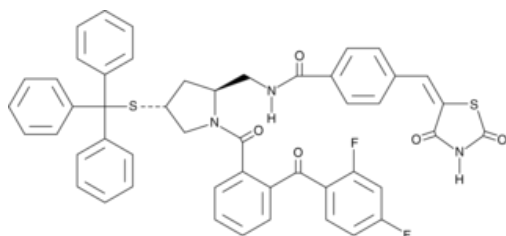
Formula C49H37F2N3O5S2 M.Wt 850

Solubility DMF: 12.5 mg/ml, DMSO: 15 mg/ml, DMSO:PBS (pH 7.2) (1:10): 0.1 mg/ml
Storage Store at 2-8°C, protect from light

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C 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

The group IVA phospholipase A2 (PLA2), known as calcium-dependent cytosolic PLA2 (cPLA2), selectively releases arachidonic acid (AA) from membrane phospholipids, playing a central role in initiating the synthesis of prostaglandins (PGs) and leukotrienes (LTs). Pyrrophenone inhibits cPLA2 α with an IC₅₀ of 4.2 nM in enzyme assays and potently blocks the release of AA and the production of PGE2 and LTC4 in cells (IC₅₀ = 24, 25, and 14 nM, respectively). Its action is reversible and selective, as pyrrophenone inhibits the secretory type IB and IIA PLA2s with more than a hundred-fold less potency. Pyrrophenone has also been shown to inhibit calcium ionophore (A23187)-stimulated AA release from monocytic cells, interleukin-1-induced PGE2 synthesis in mesangial cells,

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and the production of PGE₂, LTs, and platelet-activating factor by human neutrophils, always with maximal inhibition at concentrations below 1 μ M.

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