

Product Data Sheet

Product Name: Ivachtin
Cat. No.: GC18137

Chemical Properties

Cas. No. 745046-84-8

Chemical Name 2-(4-methyl-8-morpholin-4-ylsulfonyl-1,3-dioxopyrrolo[3,4-c]quinolin-2-yl)ethyl acetate

SMILES CC1=C2C(=C3C=C(C=CC3=N1)S(=O)(=O)N4CCOCC4)C(=O)N(C2=O)CCOC(=O)C

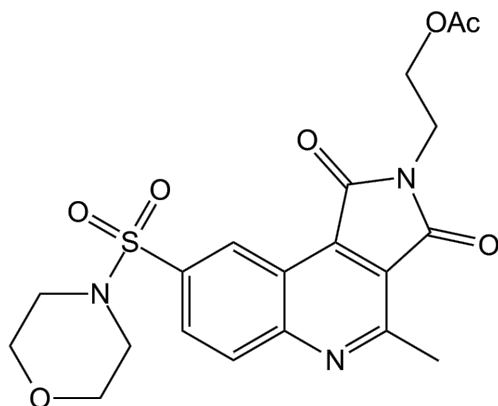
Formula $C_{20}H_{21}N_3O_7S$ M.Wt 447.46

Solubility DMF: 2.5 mg/mL, DMF:PBS (pH7.2) (1:30): 0.03 mg/mL, DMSO: slightly soluble
Storage Desiccate at 4°C

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

Ivachtin is a potent inhibitor of caspase-3 with IC50 value of 23 nM [1].

Caspase-3 is a member of the cysteine-aspartic acid protease family and interacts with caspase-8

Caution: Product has not been fully validated for medical applications. For research use only.

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and caspase-9. Sequential activation of caspases plays an important role in cell apoptosis.

Ivachtin is a potent and reversible inhibitor of caspase-3 in a noncompetitive way. Ivachtin was the most potent inhibitor against caspase-3, but the selectivity versus the remaining caspases was modest. In human Jurkat T cells treated with 10 μ M staurosporin, Ivachtin protected cells in a higher level, which suggested that Ivachtin had a good cell permeability and antiapoptotic activity [1].

Reference:

[1]. Kravchenko DV, Kuzovkova YA, Kysil VM, et al. Synthesis and structure-activity relationship of 4-substituted 2-(2-acetyloxyethyl)-8-(morpholine-4-sulfonyl)pyrrolo[3,4-c]quinoline-1,3-diones as potent caspase-3 inhibitors. J Med Chem, 2005, 48(11): 3680-3683.

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