

Product Data Sheet

Product Name: G6PDi-1
Cat. No.: GC47387

Chemical Properties

Cas. No. 2457232-14-1

SMILES O=C(CCCC1)C2=C1N=C(NC3=CSC(C#N)=C3)N=C2

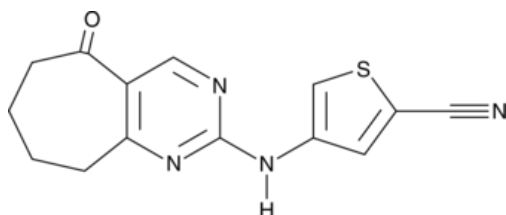
Formula C₁₄H₁₂N₄OS M.Wt 284.3

Solubility DMF: 15 mg/ml, DMF:PBS (pH 7.2) (1:4): 0.20 mg/ml, DMSO: 10 mg/ml
Storage Store at -20°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

G6PDi-1 is a reversible and noncompetitive inhibitor of glucose-6-phosphate dehydrogenase (G6PDH; IC₅₀ = 0.07 μM), the enzyme that converts G6P to 6-phosphogluconolactone using NADP⁺ as a cofactor in the first step of the pentose phosphate pathway.¹ G6PDi-1 (10 and 50 μM) reduces NADPH levels in a variety of cultured cells, including red blood cells and T cells. It decreases colony formation of HCT116 cells when used at concentrations of 20 and 30 μM, an effect that can be rescued by the antioxidant N-acetyl cysteine. G6PDi-1 decreases the production of cytokines induced by phorbol 12-myristate 13-acetate and ionomycin in T cells and prevents PMA-induced oxidative burst in neutrophils.

1. Ghergurovich, J.M., García-Cañaveras, J.C., Wang, J., et al. A small molecule G6PD inhibitor reveals immune dependence on pentose phosphate pathway. *Nat. Chem. Biol.* 16(7)731-739(2020)

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

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