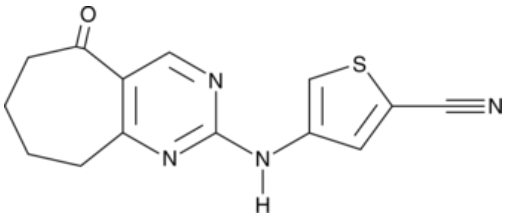
Product Data Sheet

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; IC_{50} = 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 pathwayNat. 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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