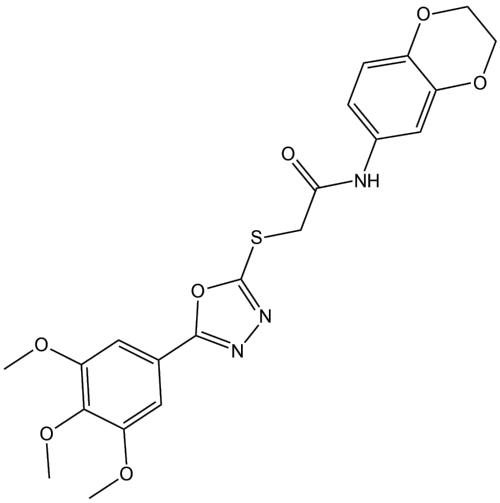
Product Data Sheet

Product Name: NC03
Cat. No.: GC27959

Chemical Properties

Cas. No.	568558-66-7		
Chemical Name	Acetamide, N-(2,3-dihydro-1,4-benzodioxin-6-yl)-2-[[5-(3,4,5-trimethoxyphenyl)-1,3,4-oxadiazol-2-yl]thio]-		
SMILES	O=C(CSC1=NN=C(C2=CC(OC)=C(OC)C(OC)=C2)O1)NC3=CC=C4OCCOC4=C3		
Formula	$C_{21}H_{21}N_3O_7S$	M.Wt	459.47
Solubility	DMSO : 100 mg/mL (217.64 mM; Need ultrasonic)	Storage	-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

NC03 is a PI4K2A inhibitor and reducing agent. NC03 inhibits the activity of PI4K2A, thereby reducing the production of PI4P in the cellular compartments where PI4K2A functions. NC03 rapidly induces a decrease in PI4P pools in the Golgi and endosomal compartments. NC03 reduces PI4P

production in Rab7-positive late endosomes[1][2][3].
In Vitro, NC03 (15-76 μM; 1 hour) potently inhibits the activity of bacterially expressed human PI4K2A enzyme in COS-7 cells[1].
NC03 (10 μM; 10 min pre-incubation, 1.5 h kinase reaction) inhibits the activity of palmitoylated PI4K2A enzyme isolated from COS-7 cells when used at 10 μM[1].
NC03 (1-10 μM; 20 min pre-incubation, 30 min permeabilized cell incubation) inhibits PI4K2A-mediated PI4P synthesis in permeabilized COS-7 cells, with secondary effects on PI(4,5)P_2 levels[1].
NC03 (10 μM; up to 10 min) rapidly reduces Golgi and endosomal PI4P pools in live COS-7 cells when used at 10 μM[1].
NC03 (10-30 μM; 30 min) decreases Rab7-positive late endosomal PI4P levels in intact HEK-AT1 cells in a concentration-dependent manner, with 30 μM showing greater efficacy than 10 μM[1].

References:
[1]. Kumari S, et al. Enhancement of aqueous solubility and oral bioavailability of nelfinavir by complexation with β-cyclodextrin[J]. Tropical Journal of Pharmaceutical Research, 2015, 14(8): 1333-1340.
[2]. Hofacker A F, et al. Mercury mobilization in a flooded soil by incorporation into metallic copper and metal sulfide nanoparticles[J]. Environmental science & technology, 2013, 47(14): 7739-7746.
[3]. Sengupta N, et al. A large scale high-throughput screen identifies chemical inhibitors of phosphatidylinositol 4-kinase type II alpha. J Lipid Res. 2019;60(3):683-693.