GK13S

Cat. No.: HY-153627

Molecular Formula: $C_{21}H_{22}N_6O_2$

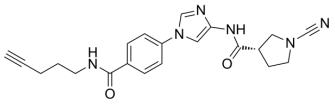
Molecular Weight: 390.44

Target: Deubiquitinase

Pathway: Cell Cycle/DNA Damage

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (128.06 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.5612 mL	12.8061 mL	25.6121 mL
5 mM	0.5122 mL	2.5612 mL	5.1224 mL
10 mM	0.2561 mL	1.2806 mL	2.5612 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.25 mg/mL (3.20 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

G13KS is a deubiquitinase UCHL1 ligand and inhibitor. G13KS inhibits recombinant and cellular UCHL1. G13KS reduces levels of monoubiquitin in human glioblastoma cells[1]. GK13S is a click chemistry reagent, it contains an Alkyne group and can undergo copper-catalyzed azide-alkyne cycloaddition (CuAAc) with molecules containing Azide groups.

IC_{50} & Target

UCHL1
50 nM (IC_{50})

In Vitro

GK13S (0-1 μM, 1 h) inhibits recombinant UCHL1 with an IC_{50} of 50 nM[1].
GK13S (1-10 μM, 24 h) inhibits cellular UCHL1 in HEK293 cells[1].
GK13S (5 μM, 72 h) does not impair HEK293 cell growth[1].
GK13S (5 μM, 48 h) reduces ubiquitin levels in U-87 MG cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	HEK293 cell
Concentration:	1, 5, 10 μM
Incubation Time:	24 h
Result:	Nearly completely inhibits UCHL1 at 1 μM.

REFERENCES

[1]. Grethe C, et al. Structural basis for specific inhibition of the deubiquitinase UCHL1. Nat Commun. 2022 Oct 10;13(1):5950.

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