Product Data Sheet

Product Name: INY-03-041 trihydrochloride
Cat. No.: GC67757

Chemical Properties

Cas. No.			
Formula	$C_{44}H_{59}Cl_4N_7O_5$	M.Wt	907.8
Solubility		Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	INY-03-041 trihydrochloride		

Background

INY-03-041 trihydrochloride is a potent, highly selective and PROTAC-based pan-**Akt** degrader consisting of the ATP-competitive **Akt** inhibitor Ipatasertib conjugated to Lenalidomide . INY-03-041 trihydrochloride inhibits **AKT1**, **AKT2** and **AKT3** with **IC_{50}**s of 2.0, 6.8 and 3.5 nM, respectively[1].

INY-03-041 (10-1000 nM; 0-24 hours) induces potent degradation of all three AKT isoforms in MDA-MB-468 cells[1].
INY-03-041 exhibits potent in vitro inhibition of S6K1 (IC_{50} =37.3 nM) and PKG1 (IC_{50} = 33.2 nM)[1].
INY-03-041 displays enhanced anti-proliferative effects compared with Ipatasertib in MDA-MB-468 and HCC1937 cells[1].
INY-03-041 (250 nM, 12 h) promotes sustained AKT degradation and inhibition of downstream signaling effects for up to 96 h, even after compound washout[1].

Western Blot Analysis[1]

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Cell Line:	MDA-MB-468 cells
Concentration:	0, 10, 50, 100, 250, 500, and 1000 nM
Incubation Time:	0, 2, 4, 6, 8. 10, 12, and 24 h
Result:	Induced potent degradation of all three AKT isoforms in a dose-dependent manner after a 12-h treatment, with maximal degradation observed between 100 and 250 nM. At concentrations of 500 nM and greater, AKT degradation is diminished. Treatment with 250 nM of INY-03-041 over time reveals partial degradation of all AKT isoforms within 4 h and progressive loss of AKT abundance out to 24 h.

[1]. You I, et al. Discovery of an AKT Degrader with Prolonged Inhibition of Downstream Signaling. Cell Chem Biol. 2020 Jan 16;27(1):66-73.e7.
[2]. Maira SM, et al. Identification and characterization of NVP-BKM120, an orally available pan-class I PI3-kinase inhibitor. Mol Cancer Ther. 2012 Feb;11(2):317-28.

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