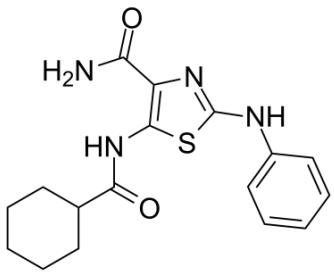
UNC3230

Cat. No.:	HY-110150		
CAS No.:	1031602-63-7		
Molecular Formula:	$C_{17}H_{20}N_4O_2S$		
Molecular Weight:	344.43		
Target:	Others		
Pathway:	Others		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



BIOLOGICAL ACTIVITY

Description	UNC3230 is a potent, selective and ATP-competitive PIP5K1C inhibitor with an IC_{50} of ~41 nM. UNC3230 also inhibits PIP4K2C and does not inhibit any of the other lipid kinases that regulate phosphoinositide levels. UNC3230 has antinociceptive and anticancer effects[1].
IC_{50} & Target	IC50: ~41 nM (Phosphatidylinositol 4-phosphate 5 kinase type 1C (PIP5K1C))[1]
In Vitro	Membrane PIP2 levels are significantly reduced by ~45% in dorsal root ganglia (DRG) neurons treated with 100 nM UNC3230 (~2-fold above the IC50) relative to vehicle controls. UNC3230 significantly reduces lysophosphatidic acid (LPA)-evoked calcium signaling in cultured DRG neurons relative to vehicle[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	UNC3230 (2 nmol) significantly increases noxious heat-evoked paw withdrawal latency for two hours after intrathecal injection in wild-type mice, indicating an antinociceptive effect[1]. UNC3230 (2 nmol; intrathecal injection) is administered then one hour later co-injected 1 nmol LPA with UNC3230 (2 nmol, intrathecal injection). UNC3230 significantly blunts thermal hyperalgesia and mechanical allodynia compared to vehicle[1]. UNC3230 (2 nmol; intrathecal injection) significantly blunts thermal hyperalgesia and mechanical allodynia in the complete Freund's adjuvant (CFA)-inflamed hindpaw (relative to vehicle control) but does not affect thermal or mechanical sensitivity in the control (non-inflamed) hindpaw over a multiday time course[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Wright BD, et al. The lipid kinase PIP5K1C regulates pain signaling and sensitization. Neuron. 2014 May 21;82(4):836-47.

[2]. Peng W, et al. Type Iγ phosphatidylinositol phosphate kinase promotes tumor growth by facilitating Warburg effect in colorectal cancer. EBioMedicine. 2019 Jun;44:375-386.

[3]. Wright BD, et al. Development of a High-Throughput Screening Assay to Identify Inhibitors of the Lipid Kinase PIP5K1C. J Biomol Screen. 2015 Jun;20(5):655-62.

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

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