



Torin 1

Data Sheet

Catalog Number:	MC11060	Product Type:	Small Molecule
Bio-Activity:	mTOR inhibitor	CAS #:	1222998-36-8
Research Categories:	Neuroscience, oxidative stress, cancer, stem cells, angiogenesis, diabetes, cancer	Chemical Name:	1-[4-[4-(1-oxopropyl)-1-piperazinyl]-3-(trifluoromethyl)phenyl]-9-(3-quinoliny)-benzo[h]-1,6-naphthyridin-2(1H)-one
Solubility:	Soluble in DMSO (up to 8 mg/ml with warming)	Molecular Formula:	C35H28F3N5O2
Purity:	> 98%	Molecular Weight:	607.6
Format:	Powder	Ship Temp:	Ambient
Storage:	-20°C		

Application Notes

Description/Data:

Potent and selective ATP-competitive mTOR inhibitor, IC50=2 and 10 nM for mTORC1 and mTORC2 respectively [1,2]. Active in vivo at inhibition of mTOR-mediated effects in mice (20 mg/kg)2. Induces autophagy [3]. Torin 1-mediated enhancement of TFEB-mediated autophagy alleviates neuronal death in oxidative stress-induced disease models [4]. Downregulates NGF expression in RSC96 cells [5].

References:

- 1) CC Thoreen et al. J. Biol. Chem. 2009 284:8023
- 2) Q Liu et al. J. Med. Chem. 2010 53:7146
- 3) F Giulitti et al. Front. Cell Dev. Biol. 2021 9:629182
- 4) X-X Zhuang et al. Cell Death Dis. 2020 11:128
- 5) M Cheng et al. Neurochem. Res. 2018 43:2141

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