



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

### Application Notes

#### Description/Data:

Potent and selective ATP-competitive mTOR inhibitor, IC<sub>50</sub>=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

### FOR RESEARCH USE ONLY

NEUROMICS' REAGENTS ARE FOR IN VITRO AND CERTAIN NON-HUMAN IN VIVO EXPERIMENTAL USE ONLY AND NOT INTENDED FOR USE IN ANY HUMAN CLINICAL INVESTIGATION, DIAGNOSIS, PROGNOSIS, OR TREATMENT. THE ABOVE ANALYSES ARE MERELY TYPICAL GUIDES. THEY ARE NOT TO BE CONSTRUED AS BEING SPECIFICATIONS. ALL OF THE ABOVE INFORMATION IS, TO THE BEST OF OUR KNOWLEDGE, TRUE AND ACCURATE. HOWEVER, SINCE THE CONDITIONS OF USE ARE BEYOND OUR CONTROL, ALL RECOMMENDATIONS OR SUGGESTIONS ARE MADE WITHOUT GUARANTEE, EXPRESS OR IMPLIED, ON OUR PART. WE DISCLAIM ALL LIABILITY IN CONNECTION WITH THE USE OF THE INFORMATION CONTAINED HEREIN OR OTHERWISE, AND ALL SUCH RISKS ARE ASSUMED BY THE USER. WE FURTHER EXPRESSLY DISCLAIM ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.-V2/08/2012