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DATASHEET

Torin 1

Product overview

Name	Torin 1
Cat No	HB2253
Biological action	Inhibitor
Purity	>98%
Description	Potent, selective mTOR inhibitor

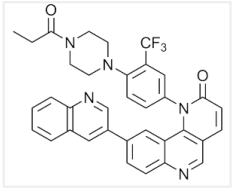
Biological Data

Biological description	Potent, selective and ATP-competitive mTOR inhibitor (IC_{50} vales are 2 and 10 nM at mTORC1 and mTORC2 respectively). Exhibits 1000-fold selecticity for mTOR over PI3K and ~100-fold selectivity when compared to 450 other protein kinases. Impairs cell growth and proliferation to a greater degree than rapamycin.

Solubility & Handling

Storage instructions	+4°C
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	1-[4-[4-(1-Oxopropyl)-1-piperazinyl]-3-(trifluoromethyl)phenyl]-9-(3-quinolinyl)-benzo[*h*]-1,6-naphthyridin-2(1*H*)-one
Molecular Weight	607.62
Chemical structure	
Molecular Formula	$C_{35}H_{28}F_3N_5O_2$
CAS Number	1222998-36-8
PubChem identifier	49836027
SMILES	O=C(N5C6=CC(C(F)(F)F)=C(N7CCN(C(CC)=O)CC7)C=C6)C=CC2=C5C1=CC(C3=CN=C(C=CC=C4)C4=C3)=CC=C1N=C2
Source	Synthetic
InChiKey	AKCRNFFTGXBONI-UHFFFAOYSA-N

References

Discovery of 1-(4-(4-propionylpiperazin-1-yl)-3-(trifluoromethyl)phenyl)-9-(quinolin-3-yl)benzo[h][1,6]naphthyridin-2(1H)-one as a highly potent, selective mammalian target of rapamycin (mTOR) inhibitor for the treatment of cancer.

Liu et al (2010) J Med CHem 53(19)

PubMedID 20860370

An ATP-competitive mammalian target of rapamycin inhibitor reveals rapamycin-resistant functions of mTORC1.

Thoreen et al (2009) J Biol Chem 284(12)
PubMedID 19150980

Selective targeting of human colon cancer stem-like cells by the mTOR inhibitor Torin-1.

Francipane and Lagasse (2013) Oncotarget 4(11)
PubMedID 24185040