

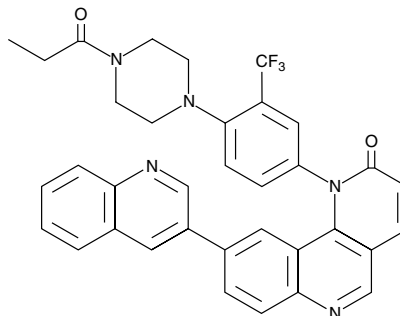
Product Information



Torin 1

Item No. 10997

CAS Registry No.: 1222998-36-8
Formal Name: 1-[4-[4-(1-oxopropyl)-1-piperazinyl]-3-(trifluoromethyl)phenyl]-9-(3-quinolinyl)-benzo[h]-1,6-naphthyridin-2(1H)-one
MF: C₃₅H₂₈F₃N₅O₂
FW: 607.6
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 204, 256, 286 nm



Laboratory Procedures

For long term storage, we suggest that torin 1 be stored as supplied at -20°C. It should be stable for at least two years.

Torin 1 is supplied as a crystalline solid. Torin 1 is soluble in N-methyl-2-pyrrolidone (NMP) to at least 25 mg/ml.¹ It is sparingly soluble in DMSO, ethanol, DMF, chloroform, acetonitrile, and PBS, pH 7.2. To enhance aqueous solubility, dilute the NMP solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Torin 1 is a potent and selective inhibitor of mTOR (IC₅₀ = 2 and 10 nM for mTORC1 and mTORC2, respectively).^{1,2} It shows over 100-fold selectivity for mTOR over PI3Kα and other PI3K-like kinases, including ATM, DNA-PK, and hVps34, as well as 450 other protein kinases.^{1,2} Torin 1, is efficacious at a dose of 20 mg/kg in inhibiting downstream effectors of mTOR in mice.²

References

1. Liu, Q., Chang, W., Wang, J., *et al.* 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. *J. Med. Chem.* **53**(19), 7146-7155 (2010).
2. Thoreen, C.C. and Kang, S.A. An ATP-competitive mammalian target of rapamycin inhibitor reveals rapamycin-resistant functions of mTORC1. *J. Biol. Chem.* **284**(12), 8023-8032 (2009).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10997

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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