

Product Data Sheet

Product Name: BC1618
Cat. No.: GC62135

Chemical Properties

Cas. No. 2222094-18-8

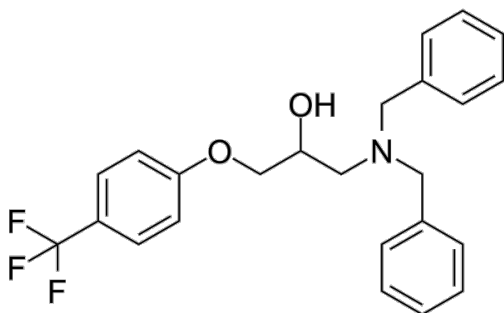
Formula $C_{24}H_{24}F_3NO_2$ M.Wt 415.45

Solubility DMSO : 100 mg/mL (240.70 mM; Need ultrasonic)|Water : < 0.1 mg/mL (insoluble) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Background

BC1618, an orally active Fbxo48 inhibitory compound, stimulates Ampk-dependent signaling (via preventing activated pAmpk α from Fbxo48-mediated degradation). BC1618 promotes mitochondrial fission, facilitates autophagy and improves hepatic insulin sensitivity[1].

BC1618 enhances pAmpk α protein stability during CHX treatment[1]. BC1618 displays more than 1,000-fold enhanced activity to stimulate pAmpk α in cells than metformin[1]. BC1618 (0.1-2 μ M, 16 h)

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

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induced dose- and time-dependent increases in pAmpk α and pACC protein levels are also confirmed in human primary-like hepatocytes[1]. BC1618 (1 μ M) effectively disrupts the interaction between Fbxo48 and pAmpk α , and has no effect on Fbxo48, Ampk α 1 or Ampk α 2 messenger RNAs[1]. BC1618 increases the abundance of a series of autophagic marker proteins during glucose depletion. BC1618 induces phosphorylation of the mTORC1 associated protein Raptor, reducing pS6 levels, all consistent with the known mTOR inhibitory effects exerted by activated Ampk[1].

BC1618 promotes mitochondrial fission, facilitates autophagy and improves hepatic insulin sensitivity in high-fat-diet-induced obese mice[1]. BC1618, appears to be ~1,000-fold more potent than metformin and is extremely well tolerated in mice[1]. BC1618 displays excellent oral bioavailability with a peak of 2,000 ng/mL within 0.5h and 500 ng/mL in plasma at 4h after an oral load of 20mg/kg[1].

[1]. Yuan Liu, et al. A Fbxo48 inhibitor prevents pAMPK α degradation and ameliorates insulin resistance. Nat Chem Biol. 2021 Mar;17(3):298-306.

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