

A-769662

Catalog No: tcsc0005



Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg

Size: 200mg

Size: 500mg



Specifications

CAS No:

844499-71-4

Formula:

$C_{20}H_{12}N_2O_3S$

Pathway:

Epigenetics;PI3K/Akt/mTOR

Target:

AMPK;AMPK

Purity / Grade:

>99%

Solubility:

DMSO : 180 mg/mL (499.5 mM; Need ultrasonic and warming)

Water: 2 mg/ml (5.5mM)

Storage Instruction:

Powder: -20°C 3 years In Solvent -80°C 12 Months

Observed Molecular Weight:

360.39

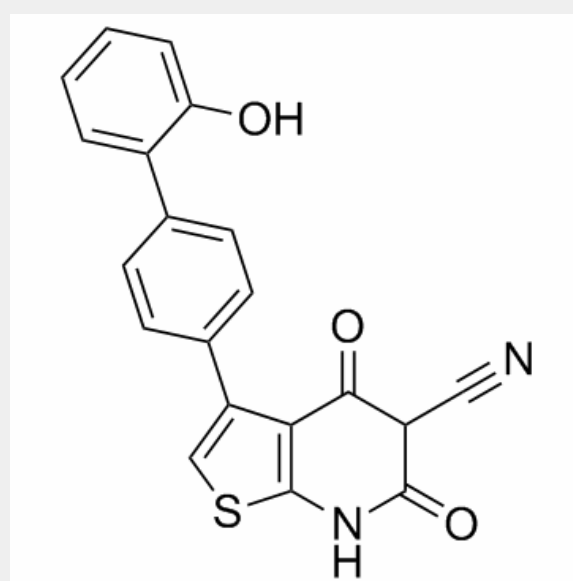
Product Description

A-769662 is a potent, reversible **AMPK** activator with EC₅₀ of 0.8 μM, and has little effect on GPPase/FBPase activity.

IC50 & Target: EC50: 0.8 μM (AMPK)

In Vitro: A-769662 is equally potent in activating the baculovirus expressed α1,β1,γ1 recombinant isoform of AMPK (EC₅₀=0.7 μM). A-769662 and A-592107 activate AMPK purified from multiple tissues and species in a dose-responsive manner with modest variations in observed EC₅₀s. EC₅₀s determined for A-769662 using partially purified AMPK extracts from rat heart, rat muscle, or human embryonic kidney cells (HEKs) are 2.2 μM, 1.9 μM, or 1.1 μM, respectively^[1]. A-769662 activates endogenous AMPK in LKB1-expressing (HEK293) and LKB1-deficient (CCL13) cells. A-769662 allosterically activates AMPK complexes containing γ1 harboring a substitution of arginine residue 298 to glycine (R298G). A-769662 inhibits dephosphorylation of Thr-172 in the mutant γ1-containing complexes to a similar degree as seen in the wild-type complexes^[2]. A769662 (300 μM) has toxic effects on MEF cells. A769662 reversibly inhibits the proteasomal activity^[3].

In Vivo: A-769662 (30 mg/kg, i.p.) significantly reduced the respiratory exchange ratio (RER) in the SD rat. There are 33% and 58% reductions of malonyl CoA levels in livers of animals treated with 30 mg/kg A-769662 (0.905 nmol/g) or 500 mg/kg metformin (0.574 nmol/g), respectively. A-769662 (30 mg/kg, b.i.d.) significantly decreases fed plasma glucose (30%-40% reduction), while the lower doses (3 and 10 mg/kg) of A-769662 had no effect on the in diabetic *ob/ob* mice^[1].



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!