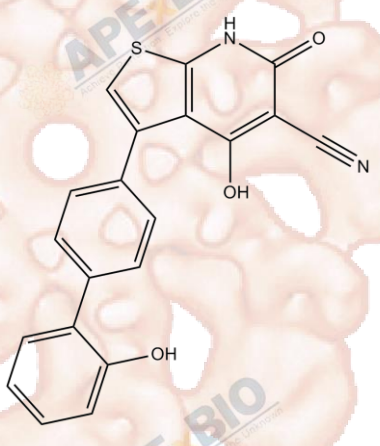
Product Data Sheet

A-769662

Cat. No.:	A3963
CAS No.:	844499-71-4
Formula:	C20H12N2O3S
M.Wt:	360.39
Synonyms:	A-769662; A769662
Target:	Others
Pathway:	Others
Storage:	Store at -20°C



Solvent & Solubility

In Vitro

insoluble in EtOH; insoluble in H2O; ⩾18.02 mg/mL in DMSO

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.7748 mL	13.8739 mL	27.7477 mL
5 mM	0.5550 mL	2.7748 mL	5.5495 mL
10 mM	0.2775 mL	1.3874 mL	2.7748 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	AMPK activator,potent and reversible
IC_{50} & Target	116 nM (EC50) (AMPK)

In Vitro

Cell Viability Assay

Cell Line:	Primary rat hepatocytes.
Preparation method:	Soluble in DMSO > 10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	4 h.

	Applications:	A-769662 dose-dependently increases ACC phosphorylation, which is phosphorylated by AMPK. A-769662 inhibits fatty acid synthesis with IC50 value of 3.2 μM. Treatment of rat hepatocytes with A-769662 at concentrations up to 100 μM shows no measurable cytotoxicity.
In Vivo	**Animal experiment**	
	Animal models:	Sprague Dawley (SD) rats.
	Dosage form:	30 mg/kg; gavaged.
	Applications:	A-769662 significantly reduces the respiratory exchange ratio (RER) throughout the first 3 h, which is followed by a small but significant increase in RER over the subsequent 3 h. A-769662 reduces malonyl CoA levels in rat livers by 33%.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Cannon, Danielle Kathryn. "ASSESSING MENOPAUSAL FEMALE SUSCEPTIBILITY TO HEART DISEASE: A FOCUS ON AMPK'S ABILITY TO MITIGATE CARDIAC REMODELING THROUGH ESTROGEN-DEPENDENT GENE PROGRAMS." The University of Arizona. 2019.

2. Wen Z, Jin K, et al. "N-myristoyltransferase deficiency impairs activation of kinase AMPK and promotes synovial tissue inflammation." Nat Immunol. 2019 Mar;20(3):313-325.PMID:30718913

3. Hubbard JA, Xiao B, et al. "Production and Crystallization of Full-Length Human AMP-Activated Protein Kinase (α1β1γ1)." Methods Mol Biol. 2018;1732:1-14.PMID:29480465

4. Oladimeji PO, Lin W, et al. "Glucose-dependent regulation of pregnane X receptor is modulated by AMP-activated protein kinase." Sci Rep. 2017 Apr 24;7:46751.PMID:28436464

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References

[1]. Cool B, Zinker B, Chiou W, et al. Identification and characterization of a small molecule AMPK activator that treats key components of type 2 diabetes and the metabolic syndrome. Cell Metab, 2006, 3(6): 403-416.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt

of the product, follow the storage recommendations on the product data sheet.

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