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## DATASHEET

A 769662

### Product overview

<b>Name</b>	A 769662
<b>Cat No</b>	HB1351
<b>Biological action</b>	Activator
<b>Purity</b>	>98%
<b>Description</b>	Potent, reversible AMPK activator. Inhibits MSC proliferation.

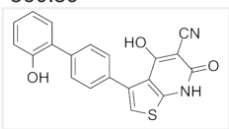
### Biological Data

<b>Biological description</b>	Potent reversible AMP-activated protein kinase (AMPK) activator ( $EC_{50} = 0.8 \mu\text{M}$ ). Activates AMPK allosterically and inhibits AMPK dephosphorylation. Also $\text{Na}^+ - \text{K}^+ - \text{ATPase}$ inhibitor ( $IC_{50}$ values are 57 and $220 \mu\text{M}$ for rat and human respectively). Stimulates glucose uptake and decreases fatty acid synthase levels. Additionally shown to inhibit MSC proliferation.
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### Solubility & Handling

<b>Storage instructions</b>	+4 °C
<b>Solubility overview</b>	Soluble in DMSO (100 mM)
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

### Chemical Data

<b>Chemical name</b>	6,7-Dihydro-4-hydroxy-3-(2'-hydroxy[1,1'-biphenyl]-4-yl)-6-oxo-thieno[2,3-b]pyridine-5-carbonitrile
<b>Molecular Weight</b>	360.39
<b>Chemical structure</b>	
<b>Molecular Formula</b>	$\text{C}_{20}\text{H}_{12}\text{N}_2\text{O}_3\text{S}$
<b>CAS Number</b>	844499-71-4
<b>PubChem identifier</b>	54708532
<b>SMILES</b>	<chem>C1=CC=C(C(=C1)C2=CC=C(C=C2)C3=CSC4=C3C(=C(C(=O)N4)C#N)O)O</chem>
<b>InChi</b>	InChI=1S/C20H12N2O3S/c21-9-14-18(24)17-15(10-26-20(17)22-19(14)25)12-7-5-11(6-8-12)13-3-1-2-4-16(13)23/h1-8,10,23H,(H2,22,24,25)
<b>InChiKey</b>	CTESJDQKVOEUOY-UHFFFAOYSA-N

### References

**Identification and characterization of a small molecule AMPK activator that treats key components of type 2 diabetes and the metabolic syndrome.**

Cool B *et al* (2006) Cell Metab 3(6)

**PubMedID** [16753576](https://pubmed.ncbi.nlm.nih.gov/16753576/)

**AMP-activated protein kinase activator A-769662 is an inhibitor of the Na(+)-K(+)-ATPase.**

Benziane B *et al* (2009) Am J Physiol Cell Physiol 297(6)

**PubMedID** [19828836](#)

**Beyond AICA riboside: in search of new specific AMP-activated protein kinase activators.**

Guigas B *et al* (2009) IUBMB Life 61(1)

**PubMedID** [18798311](#)

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