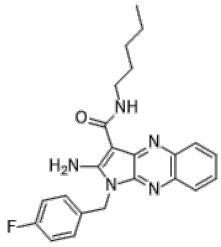
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Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	2-APQC
Cat. No.	:	PC-22370
CAS No.	:	500271-63-6
Molecular Formula	:	$C_{23}H_{24}FN_5O$
Molecular Weight	:	405.48
Target	:	Sirtuin
Solubility	:	10 mM in DMSO



CAS: 500271-63-6

Biological Activity

2-APQC is a specific, small-molecule activator of Sirtuin-3 (**SIRT3**), binds to (SPR KD=2.76 uM) and activates SIRT3 deacetylation activity.
2-APQC exhibits no apparent cytotoxicity even at 40 μM.
2-APQC could effectively ameliorate myocardial injury induced by isoproterenol (ISO).
2-APQC improved the thermal stability of SIRT3 in H9c2 cells as cellular thermal shift assay (CETSA) assays, does not significantly affect the expression of SIRTs, including SIRT1, SIRT2, SIRT4, SIRT5, SIRT6 and SIRT7.
2-APQC improves heart failure (HF) by relieving myocardial hypertrophy and inhibiting myocardial fibrosis in ISO-induced heart failure (HF) model in vitro and in vivo, could not alleviate ISO-induced HF in SIRT3 knockout mouse model.
2-APQC plays a protective role in ISO-induced heart injury by SIRT3-pyrroline-5-carboxylate reductase 1 (PYCR1) regulated mitochondrial oxidative stress and SIRT3-RIPK3-modulated necrosis.

References

Peng F, et al. ***Signal Transduct Target Ther***. 2024 May 15;9(1):133.

Caution: Product has not been fully validated for medical applications. Lab Use Only!

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