Small Molecules

Cardiogenol C

Inducer of cardiac differentiation

Catalog #	72422	1 mg
	72424	10 mg

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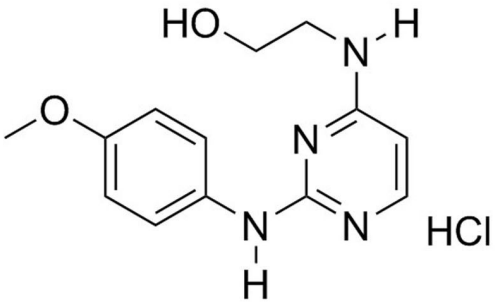
Product Description

Cardiogenol C is a diaminopyrimidine that induces cardiomyogenesis in mouse embryonic stem (ES) cells. This product is supplied as the hydrochloride salt of the molecule.

Molecular Name:	Cardiogenol C (Hydrochloride)
Alternative Names:	Cardiogenol C; Cardiogenol C hydrochloride
CAS Number:	671225-39-1
Chemical Formula:	$C_{13}H_{16}N_4O_2 \cdot HCl$
Molecular Weight:	296.8 g/mol
Purity:	≥ 97%
Chemical Name:	2-((2-((4-methoxyphenyl)amino)pyrimidin-4-yl)amino)ethan-1-ol hydrochloride
Structure:	

Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect from prolonged exposure to light. Stable as supplied for 12 months from date of receipt.
Solubility:	· PBS (pH 7.2) ≤ 30 mM · DMSO ≤ 65 mM · Absolute ethanol ≤ 3 mM For example, to prepare a 10 mM stock solution in PBS, resuspend 1 mg in 337 µL of PBS (pH 7.2).

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

REPROGRAMMING
· Induces trans-differentiation of mouse CD34+K15+ hair bulge progenitor cells into cardiomyocyte-like cells (Yau et al.).
· Induces cardiomyogenic function in the lineage-committed progenitor cells, C2C12 skeletal myoblasts, and mouse A5 cardiovascular progenitor cells (Mike et al.).
DIFFERENTIATION
· Induces the differentiation of myosin heavy chain (MHC)-positive cardiomyocytes from mouse ES cells (Wu et al.).

References

Mike AK et al. (2014) Small molecule cardiogenol C upregulates cardiac markers and induces cardiac functional properties in lineage-committed progenitor cells. Cell Physiol Biochem 33(1): 205–21.
Wu X et al. (2004) Small molecules that induce cardiomyogenesis in embryonic stem cells. J Am Chem Soc 126(6): 1590–1.
Yau WW et al. (2011) Cardiogenol C can induce mouse hair bulge progenitor cells to transdifferentiate into cardiomyocyte-like cells. Proteome Sci 9(1): 3.

Related Small Molecules

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This product is hazardous. Please refer to the Safety Data Sheet (SDS).