Small Molecules

HA-100

Protein kinase inhibitor; Inhibits PKA, PKC, and PKG

Catalog #	72482	5 mg
	72484	25 mg

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TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713
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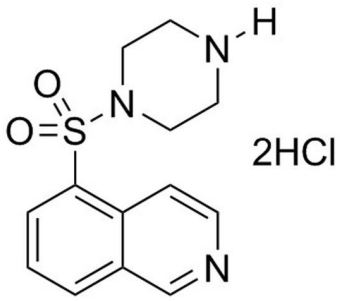
Product Description

HA-100 is an isoquinoline compound with an added piperazinylsulfonyl group that acts as an inhibitor of protein kinases (PKs), including PKA, PKC, and PKG (IC_{50} = 8, 12, and 4 µM, respectively; Hagiwara et al.). It less effectively blocks the activity of myosin light chain kinase (IC_{50} = 240 µM; Hagiwara et al.). This product is supplied as the dihydrochloride salt of the molecule.

Molecular Name:	HA-100 (Dihydrochloride)
Alternative Names:	Not applicable
CAS Number:	210297-47-5
Chemical Formula:	$C_{13}H_{15}N_3O_2S \cdot 2HCl$
Molecular Weight:	350.3 g/mol
Purity:	≥ 95%
Chemical Name:	C-1; 5-(1-piperazinylsulfonyl)-isoquinoline, dihydrochloride
Structure:	



Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com.
Solubility:	· DMSO ≤ 3.1 mM For example, to prepare a 2 mM stock solution in DMSO, resuspend 1 mg in 1.43 mL of fresh DMSO. 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. Compound has low solubility in aqueous media. 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

MAINTENANCE AND SELF-RENEWAL
· Improves single cell survival and supports high cloning efficiency in human pluripotent stem cell cultures (Chen et al.).
REPROGRAMMING
· Increases human fibroblast reprogramming efficiency with PD0325901, CHIR99021, A83-01 and hLIF (Yu et al.).

References

Chen G et al. (2011) Chemically defined conditions for human iPSC derivation and culture. Nat Methods 8(5): 424–9.
Hagiwara M et al. (1987) Selective modulation of calcium-dependent myosin phosphorylation by novel protein kinase inhibitors, isoquinolinesulfonamide derivatives. Mol Pharmacol 32(1): 7–12.
Yu J et al. (2011) Efficient feeder-free episomal reprogramming with small molecules. M. Pera (Ed.). PLoS One 6(3): e17557.

Related Small Molecules

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