Small Molecules

Sinomenine

Anti-inflammatory

Catalog #	72882	50 mg
	72884	500 mg

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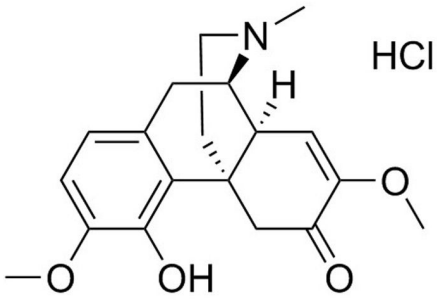
Product Description

Sinomenine is a natural plant alkaloid commonly used to alleviate inflammation associated with rheumatoid arthritis (Wang and Li). It impairs signaling through Nuclear factor-kappaβ (NF-κβ; Sun et al.; Wang and Li) and enhances the bioavailability of some compounds, at least in part through an inhibition of drug export by transporters like P-glycoprotein (Kesarwani et al.; Liu et al.). This product is supplied as the hydrochloride salt of the molecule.

Molecular Name:	Sinomenine (Hydrochloride)
Alternative Names:	Cocculine; Cucoline; NSC 76021
CAS Number:	6080-33-7
Chemical Formula:	$C_{19}H_{23}NO_4 \cdot HCl$
Molecular Weight:	365.9 g/mol
Purity:	≥ 98%
Chemical Name:	9-alpha,13-alpha,14-alpha-Morphinan-6-one,7,8-didehydro-3,7-dimethoxy-4-hydroxy-17-methyl-,hydrochloride

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:	· PBS (pH 7.2) ≤ 13 mM · DMSO ≤ 80 mM · Absolute ethanol ≤ 13 mM For example, to prepare a 10 mM stock solution in DMSO, resuspend 50 mg in 13.7 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. 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
· Promotes self-renewal in cultured human and mouse embryonic stem (ES) cells (Desbordes et al.).

References

Desbordes SC et al. (2008) High-throughput screening assay for the identification of compounds regulating self-renewal and differentiation in human embryonic stem cells. Cell Stem Cell 2(6): 602–12.
Kesarwani K et al. (2013) Bioavailability enhancers of herbal origin: an overview. Asian Pac J Trop Biomed 3(4): 253–66.
Liu Z et al. (2014) Sinomenine sensitizes multidrug-resistant colon cancer cells (Caco-2) to doxorubicin by downregulation of MDR-1 expression. PLoS One 9(6): e98560.
Sun Y et al. (2014) A combination of sinomenine and methotrexate reduces joint damage of collagen induced arthritis in rats by modulating osteoclast-related cytokines. Int Immunopharmacol 18(1): 135–41.
Wang Q & Li X-K. (2011) Immunosuppressive and anti-inflammatory activities of sinomenine. Int Immunopharmacol 11(3): 373–6.

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