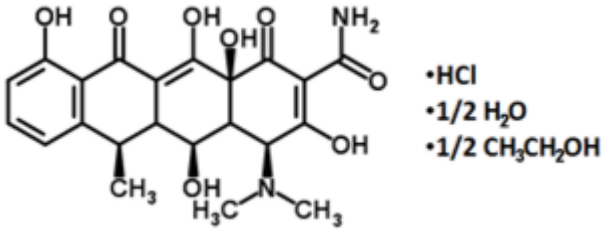
PRODUCT SPECIFICATIONS SHEET:

Stemolecule™ Doxycycline hyclate

Product Name	Stemolecule™ Doxycycline Hyclate
Description	Stemolecule Doxycycline hyclate (dox) is a broad spectrum antibiotic derivative of tetracycline and an inhibitor of matrix metalloproteinases[1]. Tetracyclinecontrolled transcriptional activation is a method of inducible expression whereby transcription is reversibly turned on or off in the presence of tetracycline or one of its derivatives such as dox [2]. For this type of reprogramming method, dox-inducible lentiviral reagents are used to induce the expression of virally transduced genes and generate induced pluripotent stem (iPS) cells from somatic cells[3-7].
Catalog Number	04-0016
Size	10 mg
Alternate Names	(2*Z*,4*S*,5*S*,6*R*,12a*S*)-2-[amino(hydroxy)methylidene]-4-(dimethylamino)-5,10,11,12a-tetrahydroxy-6-methyl-4a,5,5a,6-tetrahydro-4H-tetracene-1,3,12-trione; ethanol; hydrochloride
Chemical Formula	$C_{22}H_{24}N_2O_8 \cdot HCl \cdot ½(H_2O) \cdot ½(C_2H_6O)$
Structure	
Molecular Weight	512.94
CAS Number	24390-14-5
Purity	>98% pure by TLC
Formulation	Yellow to yellow with a green cast powder

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Solubility

For a 10 mM concentrated stock solution of Doxycycline hyclate, reconstitute the compound by adding 1.95 mL of water to the entire contents of the vial.

Storage and Stability

Store powder at 4 °C or -20 °C, protected from light.

Information about the stability of Stemolecules in solution is largely not available. As a general guideline, we recommend that stock solution be freshly made and stored in aliquots at -20 °C. The effect of storage of stock solutions should be verified for each application.

Quality Control

The purity of Doxycycline hyclate was determined by TLC analysis. The accurate mass was determined by mass spectrometry. The structure was verified by NMR spectroscopy. Cellular toxicity was tested on mouse embryonic stem cells.

Regulatory Disclaimer

For research use only. Not for use in therapeutic or diagnostic procedures.

References

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