Product Information

Doxycycline (hyclate)
Item No. 14422

CAS Registry No.: 24390-14-5
Formal Name: (4S,4aR,5S,5aR,6R,12aS)-4-(dimethylamino)-1,4,4a,5,6,11,12a-octahydro-3,5,10,12,12a-pentahydroxy-6-methyl-1,11-dioxo-2-naphthacenecarboxamide, monohydrochloride, monohydrate
Synonym: WC 2031
MF: 2(C22H24N2O8) • 2HCl • H2O • C2H6O
FW: 1,025.9
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis: λ<sub>max</sub>: 215, 272, 348 nm

Laboratory Procedures

For long term storage, we suggest that doxycycline (hyclate) be stored as supplied at -20°C. It should be stable for at least two years.

Doxycycline (hyclate) is supplied as a crystalline solid. A stock solution may be made by dissolving the doxycycline (hyclate) in the solvent of choice. Doxycycline (hyclate) is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of doxycycline (hyclate) in these solvents is approximately 1 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of doxycycline (hyclate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of doxycycline (hyclate) in PBS, pH 7.2, is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Doxycycline (hyclate) is a tetracycline-like antibiotic which effectively controls or prevents a diverse array of infections, including anthrax, Lyme disease, malaria, and Brucellosis. In genetic engineering, doxycycline is used as the regulator for inducible gene expression systems, whereby expression depends on either the presence (Tet-On) or absence (Tet-Off) of doxycycline. Also, doxycycline inhibits certain matrix metalloproteinases (MMP), such as MMP-8 (K<sub>i</sub> = 36 µM). It only poorly inhibits MMP-1 and MMP-13 (K<sub>i</sub> > 100 µM).

References

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/14422

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent to the original customer that the material will meet our specifications, which extends beyond the description of the chemicals hereof. Cayman Chemical Company makes no warranty or guarantee, of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees. Buyer’s exclusive remedy and Cayman’s sole liability hereunder shall be limited to a refund of the purchase price, or as Cayman’s option, the reimbursement, at no cost to Buyer, of all material that does not meet our specifications.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.

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