
Product Data Sheet

Product Name: Doxycycline HCl

Cat. No.: GC13750

Chemical Properties

Cas. No. 10592-13-9

Chemical Name (4S,4aR,5S,5aR,6R,12aR)-4-(dimethylamino)-1,5,10,11,12a-pentahydroxy-6-methyl-3,12-dioxo-4a,5,5a,6-tetrahydro-4H-tetracene-2-carboxamide;hydrochloride

SMILES CC1C2C(C3C(C(=O)C(=C(C3(C(=O)C2=C(C4=C1C=CC=C4O)O)O)C(=O)N)N(C)C)O)O.ClFormula $C_{22}H_{24}N_2O_8.HCl$ M.Wt 480.9

Solubility ≥ 16.4 mg/mL in DMSO, ≥ 48.5 mg/mL in Water, ≥ 9.7 mg/mL in EtOH with ultrasonic and warming
Store Storage at -20°C

General For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the tips ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Evaluation sample solution: ship with blue ice All other available size: ship with RT, or Condition blue ice upon request.

Structure **Background**

Doxycycline hydrochloride, an antibiotic, is an orally active and broad-spectrum metalloproteinase (MMP) inhibitor[1].

Doxycycline hydrochloride affects growth of glioma cells only under high concentrations[2]. Doxycycline hydrochloride decreases MT-CO1 protein content with concentrations of 1 µg/mL and higher in SVG cells[2].

Doxycycline hydrochloride (oral; 200 or 800 mg/kg/day; for 3 months) reduces active MMP-9 in untreated HT mice in a dose-dependent manner[1]

References:

[1]. Wilfried Briest, et al. Doxycycline ameliorates the susceptibility to aortic lesions in a mouse model for the vascular type of Ehlers-Danlos syndrome. J Pharmacol Exp Ther. 2011 Jun;337(3):621-7.

[2]. Luger AL, et al. Doxycycline Impairs Mitochondrial Function and Protects Human Glioma Cells from Hypoxia-Induced Cell Death: Implications of Using Tet-Inducible Systems. Int J Mol Sci. 2018 May 17;19(5).

Caution: Product has not been fully validated for medical applications. For research use only.

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