



Doxycycline Monohydrate

Data Sheet

Catalog Number:	MC11039	Product Type:	Small Molecule
Bio-Activity:	Broad spectrum antibiotic	CAS #:	17086-28-1
Research Categories:	Neuroscience, neurodegeneration	Chemical Name:	(4S,4aR,5S,5aR,6R,12aS)-4-(Dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,5,10,12,12a-pentahydroxy-6-methyl-1,11-dioxo-2-naphthacenecarboxamide, monohydrate
Solubility:	Soluble in Water (14 mg/ml with warming) or in DMSO (up to 50 mg/ml)	Molecular Formula:	C ₂₂ H ₂₄ N ₂ O ₈ • H ₂ O
Purity:	> 98%	Molecular Weight:	462.5
Format:	Powder	Ship Temp:	Ambient
Storage:	-20°C		

Application Notes

Description/Data:

A broad-spectrum tetracycline antibiotic [1]. Inhibits matrix metalloproteases [2]. Promotes wound repair by inhibiting collagen degradation in rat models [3]. Displays neuroprotective effects in neurodegenerative diseases [4]. Frequently used in doxycycline-controlled transcriptional activation systems for regulation of gene expression in cell culture and organisms [5,6].

References:

- 1) JL Riond and JE Riviere Vet. Hum. Toxicol. 1988 30:431
- 2) GN Smith et al. Arthritis Rheum. 1999 42:1140
- 3) S Lamparter et al. J. Lab. Clin. Med. 2002 139:295
- 4) FV Santa-Cecilia et al. Neurotox. Res. 2019 35:981
- 5) M Gossen et al. Science 1995 268:1766

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