

# NEUROMICS



## Doxycycline Monohydrate

## Data Sheet

---

<b>Catalog Number:</b>	MC11039	<b>Product Type:</b>	Small Molecule
<b>Bio-Activity:</b>	Broad spectrum antibiotic	<b>CAS #:</b>	17086-28-1
<b>Research Categories:</b>	Neuroscience, neurodegeneration	<b>Chemical Name:</b>	(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
<b>Solubility:</b>	Soluble in Water (14 mg/ml with warming) or in DMSO (up to 50 mg/ml)	<b>Molecular Formula:</b>	C22H24N2O8 • H2O
<b>Purity:</b>	> 98%	<b>Molecular Weight:</b>	462.5
<b>Format:</b>	Powder	<b>Ship Temp:</b>	Ambient
<b>Storage:</b>	-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

**FOR RESEARCH USE ONLY**

NEUROMICS' REAGENTS ARE FOR IN VITRO AND CERTAIN NON-HUMAN IN VIVO EXPERIMENTAL USE ONLY AND NOT INTENDED FOR USE IN ANY HUMAN CLINICAL INVESTIGATION, DIAGNOSIS, PROGNOSIS, OR TREATMENT. THE ABOVE ANALYSES ARE MERELY TYPICAL GUIDES. THEY ARE NOT TO BE CONSTRUED AS BEING SPECIFICATIONS. ALL OF THE ABOVE INFORMATION IS, TO THE BEST OF OUR KNOWLEDGE, TRUE AND ACCURATE. HOWEVER, SINCE THE CONDITIONS OF USE ARE BEYOND OUR CONTROL, ALL RECOMMENDATIONS OR SUGGESTIONS ARE MADE WITHOUT GUARANTEE, EXPRESS OR IMPLIED, ON OUR PART. WE DISCLAIM ALL LIABILITY IN CONNECTION WITH THE USE OF THE INFORMATION CONTAINED HEREIN OR OTHERWISE, AND ALL SUCH RISKS ARE ASSUMED BY THE USER. WE FURTHER EXPRESSLY DISCLAIM ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.-V2/08/2012

---

[www.neuromics.com](http://www.neuromics.com)

Neuromics Antibodies • 5325 West 74<sup>th</sup> Street, Suite 8 • Edina, MN 55439  
phone 866-350-1500 • fax 612-677-3976 • e-mail: [pshuster@neuromics.com](mailto:pshuster@neuromics.com)

**FOR RESEARCH USE ONLY**

NEUROMICS' REAGENTS ARE FOR IN VITRO AND CERTAIN NON-HUMAN IN VIVO EXPERIMENTAL USE ONLY AND NOT INTENDED FOR USE IN ANY HUMAN CLINICAL INVESTIGATION, DIAGNOSIS, PROGNOSIS, OR TREATMENT. THE ABOVE ANALYSES ARE MERELY TYPICAL GUIDES. THEY ARE NOT TO BE CONSTRUED AS BEING SPECIFICATIONS. ALL OF THE ABOVE INFORMATION IS, TO THE BEST OF OUR KNOWLEDGE, TRUE AND ACCURATE. HOWEVER, SINCE THE CONDITIONS OF USE ARE BEYOND OUR CONTROL, ALL RECOMMENDATIONS OR SUGGESTIONS ARE MADE WITHOUT GUARANTEE, EXPRESS OR IMPLIED, ON OUR PART. WE DISCLAIM ALL LIABILITY IN CONNECTION WITH THE USE OF THE INFORMATION CONTAINED HEREIN OR OTHERWISE, AND ALL SUCH RISKS ARE ASSUMED BY THE USER. WE FURTHER EXPRESSLY DISCLAIM ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.-V2/08/2012

---

[www.neuromics.com](http://www.neuromics.com)

Neuromics Antibodies • 5325 West 74<sup>th</sup> Street, Suite 8 • Edina, MN 55439  
phone 866-350-1500 • fax 612-677-3976 • e-mail: [pshuster@neuromics.com](mailto:pshuster@neuromics.com)