



## **Doxycycline (hydrochloride)**

Catalog No: tcsc2632

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Available Si	zes		
Size: 1g			
Size: 5g			
Specification	ns		
<b>CAS No:</b> 10592-13-9			
Formula: C <sub>22</sub> H <sub>25</sub> CIN <sub>2</sub> O <sub>8</sub>			
Pathway: Metabolic Enzyme/Pro	tease		
<b>Target:</b> MMP			
Purity / Grade: >98%			
<b>Solubility:</b> 10 mM in DMSO			
<b>Observed Molecula</b> 480.9	r Weight:		

## **Product Description**

Doxycycline hydrochloride is a tetracycline antibiotic and broad-spectrum metalloproteinase (MMP) inhibitor.

IC50 & Target: MMP

In Vitro: Doxycycline shows excellent effectiveness and time-dependent characteristics against M. gallisepticum strain S6 in vitro<sup>[2]</sup>. Osteoblasts exposed to the composite containing 25  $\mu$ g/mL doxycycline (DOX)/ $\beta$ -cyclodextrin ( $\beta$ CD) has increased cell proliferation





(p [3]. Doxycycline (20 nM) inhibits ECM (extracellular matrix) production and remodeling in both SMC (smooth muscle cell) types of cultures, and synthesis of collagens and isoprenylated proteins in SMC-Ch (a cholesterol-rich diet) is a higher than in SMC-C (a standard diet)<sup>[4]</sup>.

In Vivo: In heterozygous (HT) Col3a1 knockout mice, after 3 months of treatment with doxycycline or placebo, 9-month-old HT or wild-type (WT) mice are subjected to surgical stressing of the aorta. A 3-fold increase in stress-induced aortic lesions found in untreated HT mice 1 week after intervention (cumulative score  $4.5\pm0.87$  versus  $1.3\pm0.34$  in WT, p[1].

All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!