

## Doxycycline hyclate

### Product Information

Product Name	Cat#	Size
Doxycycline hyclate	60204ES03	1 g
	60204ES08	5 g
	60204ES25	25 g

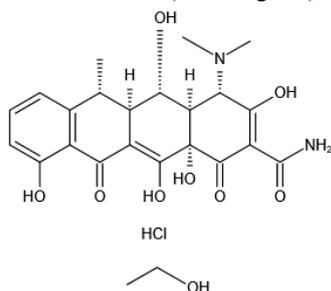
### Product Description

Doxycycline Hyclate, is a synthetic oxytetracycline broad-spectrum antibiotic, primarily targeting bacteria responsible for respiratory infections, including *Mycoplasma pneumoniae* and *Haemophilus influenzae*. Additionally, it can be used to treat variety of infections such as Lyme disease, *Rickettsia*, and some spirochetes, and has antigenic and insect repellent functions. Doxycycline inhibits bacterial protein synthesis by binding to the 30S ribosomal subunit. Doxycycline Hyclate is also an inhibitor of matrix metalloproteinases (MMP), including MMP-8 (neutrophil collagenase; IC50: 30  $\mu$ M) and MMP-1 (interstitial collagenase; IC50: 300  $\mu$ M). Doxycycline Hyclate has been observed to significantly decrease the levels and activity of metalloproteinase-9 (MMP-9) in corneal erosion studies. Doxycycline Hyclate blocks collagen activity and increases smooth muscle cell adhesion, and changes the reorganization of fibrillar collagen matrices and cell migration in smooth muscle studies. Doxycycline hydrochloride is also commonly used in tet-on (rtTA dependent) and tet-off (tTA dependent) systems to regulate gene expression, both in vivo and in vitro.

### Product Properties

<b>Synonyms</b>	Doxycycline hydrochloride hemimethanolate hemihydrate; WC2031
<b>CAS#</b>	24390-14-5
<b>Formula</b>	$C_{22}H_{24}N_2O_8 \cdot HCl \cdot 0.5H_2O \cdot 0.5C_2H_6O$
<b>Molecular Weight</b>	512.94
<b>Appearance</b>	Light yellow powder
<b>Potency (Anhydrous)</b>	800 - 920 $\mu$ g/mg
<b>Grade</b>	USP
<b>Solubility</b>	Soluble in water ( $\geq 100$ mg/mL), DMSO ( $\geq 100$ mg/mL) and methanol. Insoluble in chloroform.

### Structure



### Shipping and Storage

The product is shipped with ice pack and can be stored at 2-8°C for 2 years. The aqueous solution can only be stored stably at 4 °C for 5 days, and can be stored at for a longer term at -20 °C.

### Cautions

1. For your safety and health, please wear lab coats and disposable gloves for operation.
2. For research use only.