



Feb 16, 2025

Doxycycline Diet and Intraperitoneal Injections

DOI

<https://dx.doi.org/10.17504/protocols.io.kxygxwo24v8j/v1>

Yujie Fan¹, Chelsie Steele¹

¹Caltech



Chelsie Steele

Caltech

Create & collaborate more with a free account

Edit and publish protocols, collaborate in communities, share insights through comments, and track progress with run records.

Create free account

OPEN  ACCESS



DOI: <https://dx.doi.org/10.17504/protocols.io.kxygxwo24v8j/v1>

Protocol Citation: Yujie Fan, Chelsie Steele 2025. Doxycycline Diet and Intraperitoneal Injections. **protocols.io**
<https://dx.doi.org/10.17504/protocols.io.kxygxwo24v8j/v1>

License: This is an open access protocol distributed under the terms of the **Creative Commons Attribution License**, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

Protocol status: Working

We use this protocol and it's working

Created: January 07, 2025



Last Modified: February 16, 2025

Protocol Integer ID: 117856

Keywords: doxycycline injection, doxycycline feed, doxycycline diet, doxycycline injection of 2mg, doxycycline treatment, doxycycline, intraperitoneal injections the virus, intraperitoneal injection, injection, orbital injection, virus

Funders Acknowledgements:

Aligning Science Across Parkinson's

Grant ID: ASAP-020495

Abstract

The virus constructed is activated by doxycycline. In order to activate the virus, we wait 2 weeks after retro-orbital injection to ensure the virus has been taken up by the cells, and then begin doxycycline treatment. The mice receive a doxycycline feed daily, as well as a doxycycline injection of 2mg/kg twice weekly. The mice remain on this doxycycline diet and injections until they are culled.

Materials

Doxycycline (D9891-10G, Sigma Aldrich)

Saline

Doxycycline diet (Cat No. S3888, Bio-Serv)



Doxycycline Intraperitoneal Injections

3w 2d

- 1 A solution of 2mgs/kg doxycycline (D9891-10G, Sigma Aldrich) diluted in saline is made once every 2 weeks 2w
- 2 Mice are weighed weekly, and their weight is recorded 1w
- 3 2 weeks after RO injection of AAV, mice begin receiving doxycycline injections
- 4 mice are injected twice weekly via intraperitoneal injection using a 23G needle 2d

Doxycycline Diet

8w

- 5 2 weeks after RO injection of AAV, mice diet is switched to a doxycycline diet (Cat No. S3888, Bio-Serv) 8w
- 6 Mice stay on the doxycycline diet until culling, typically 8 weeks after first administering the doxycycline