

Asthma Sensitization by Intratracheal 氣管內氣喘致敏疾病模式

1. Purpose

- 1.1 Mice are sensitized and challenged through the airway with ovalbumin (OVA) to induce airway inflammation in a murine asthma model.

2. Safety Requirements

- 2.1 General laboratory procedures should be followed, which include: no eating, no chewing gum, no drinking, and no applying of cosmetics in the work area. The researcher must wear the laboratory coat, gloves and a mask during the experiment.

3. Referenced Documents

- 3.1 http://www.buxco.com/products_technologies_wholebodyplethysmography.a.spx

4. Notes

- 4.1 The mice must be maintained in a controlled environment with stable temperature, humidity, and air pressure. Keep minimal disturbing and stress on the tested mice whenever is possible.
- 4.2 The OVA-induced airway inflammation is age/sex/strain dependent. Therefore, we suggest to use 5~7week-old female BALB/c mice.
- 4.3 We suggest to use age-match (age within the same week) and weight-match female BALB/c mice.

5. Quality Control

- 5.1 We use mice with age in the same week-old and with similar body weight to control experiment variation.

6. Equipment

- 6.1 Platform for intratracheal injection
- 6.2 Pipette man

7. Supplies

- 7.1 Cap
- 7.2 Gloves
- 7.3 Mask
- 7.4 Ethanol 70%
- 7.5 HOCl
- 7.6 Paper towel
- 7.7 Ovalbumin (OVA)
- 7.8 PBS
- 7.9 Zoletil
- 7.10 Rompun
- 7.11 26G needle
- 7.12 Syringe 1mL

8. Procedures

- 8.1 We prepare PBS and OVA 200 μ L (100 μ g OVA and 0.8 mg of aluminum hydroxide in 200 μ L pH=7.4 PBS).

- 8.2 All mice are immunized on scheduled days (i.e., day 0, 1, 2, and 14) by i.p. injections of 200 μ L PBS/OVA.
- 8.3 On days 14, 17, and 20, mice are anesthetized and sensitized by Intratracheal inhalation of 50 μ L aerosolized PBS/OVA.
- 8.4 Mice Penh will be measured by using Buxco WBP system on the 21th day.
- 8.5 Sacrifice mice after Penh measurement.

