

论著

## BN大鼠与Wistar大鼠 I 型超敏反应敏感性的比较

李中港, 秦慧迪, 汪怀山, 史艳秋, 刘兆平

(山东大学新药评价中心, 山东 济南 250012)

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**摘要** 目的 比较BN大鼠和Wistar大鼠在 I 型超敏反应中的敏感性, 建立一种灵敏可靠的 I 型超敏反应检测体系。方法 BN大鼠和Wistar大鼠分别隔天sc不同剂量的卵白蛋白(10, 20和40  $\mu\text{g} \cdot \text{kg}^{-1}$ ), 共5次, 正常对照组sc给予生理盐水。首次注射后第21 天取血清, 用ELISA法测定血清总免疫球蛋白E (IgE) 水平, 通过被动皮肤过敏反应实验检测其特异性IgE水平; 第22天检测激发后大鼠血压、血清中组胺和类胰蛋白酶浓度的变化。结果 与正常对照组比较, BN大鼠在卵白蛋白10, 20和40  $\mu\text{g} \cdot \text{kg}^{-1}$ 下血清总IgE和特异性IgE显著增加, 血压下降, 血清组胺和类胰蛋白酶浓度增加; Wistar大鼠仅在卵白蛋白40  $\mu\text{g} \cdot \text{kg}^{-1}$ 组出现上述变化。结论 与Wistar大鼠相比, BN大鼠用于 I 型超敏反应的检测更为灵敏。血压和血清总IgE、特异性IgE、组胺及类胰蛋白酶浓度等可作为 I 型超敏反应重要的检测指标。

**关键词** [超敏反应](#), [速发型](#) [模型](#), [动物](#) [免疫球蛋白E](#) [组胺](#) [类胰蛋白酶类](#)

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## Sensitivity in type I hypersensitivity compared between BN rats and Wistar rats

LI Zhong-gang, QIN Hui-di, WANG Huai-shan, SHI Yan-qiu, LIU Zhao-ping

(Center for New Drug Evaluation, Shandong University, Jinan 250012, China)

### Abstract

**OBJECTIVE** To compare sensitivity in type I hypersensitivity between BN and Wistar rats, and to establish a sensitive and reliable determination system for type I hypersensitivity. **METHODS** BN and Wistar rats were sc given ovalbumin (OVA) 10, 20 and 40  $\mu\text{g} \cdot \text{kg}^{-1}$  every other day for 5 times and normal control group with sc normal saline. The total immunoglobulin E (IgE) levels in serum were determined with ELISA and the specific IgE levels in serum were determined by passive cutaneous anaphylaxis on the 21st day from the 1st injection. The blood pressure, serum histamine and tryptase levels were determined after challenge on the 22nd day. **RESULTS** Total IgE, specific IgE, histamine and tryptase levels in serum significantly increased and blood pressure decreased in OVA 10, 20 and 40  $\mu\text{g} \cdot \text{kg}^{-1}$  BN rat groups compared with normal control group, while in Wistar rats these symptoms only appeared in OVA 40  $\mu\text{g} \cdot \text{kg}^{-1}$  group. **CONCLUSION** BN rats are more sensitive than Wistar rats in type I hypersensitivity. The blood pressure, serum total IgE, specific IgE, histamine and tryptase levels can be used as the important indicators in type I hypersensitivity.

**Key words** [hypersensitivity](#) [immediate](#) [models](#) [animal](#) [immunoglobulin E](#) [histamine](#) [tryptases](#)

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通讯作者 刘兆平 [liuzhaoping@sdu.edu.cn](mailto:liuzhaoping@sdu.edu.cn)

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