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Establishment of a mouse model containing blood group antibodies

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lei wang¹

¹Hubei Shizhen Laboratory, Hubei University of Chinese Medicine

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lei wang

Hubei Shizhen Laboratory, Hubei University of Chinese Medici...

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We use this protocol and it's working

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Abstract

Animals were immunized with ABO blood type antigens for the first 3 weeks. Five days after the tumor cell line (2×10^5 /mouse) was inoculated in the mouse armpit, local injection of lentivirus-ABO drugs (1×10^7 /mouse, 200 μ l) was started, once every 2 days, and the empty virus was used as the control group.

Image Attribution

The datasets used and/or analysed during the current study available from the corresponding author on reasonable request. The pictures are copyrighted by the author.

Guidelines

Chinese Animal Welfare Guidelines (2023)

Article 25 [Welfare Ethics Principles] The use of experimental animals shall follow the principles of substitution, reduction and optimization.

Units and individuals engaged in experimental animal work shall take effective measures to meet the welfare of experimental animals and the ethical requirements of animal experiments.

Article 26 [Welfare Ethics Management] The science and technology department of the State Council shall establish the National Laboratory Animal Welfare Ethics Committee to guide the welfare of experimental animals and animal experiment ethics work across the country.

The science and technology departments of the people's governments of provinces, autonomous regions, and municipalities directly under the Central Government and the Xinjiang Production and Construction Corps shall be responsible for guiding and supervising the welfare and ethical management of experimental animals in their administrative regions.

Article 27 [Welfare Ethics Review] Units engaged in experimental animal work shall establish an experimental animal welfare ethics committee to conduct independent, fair and scientific ethical review and supervision of activities involving experimental animals.

Individuals engaged in experimental animal work shall entrust the welfare ethics committee of similar experimental animal units to conduct reviews when conducting related activities involving experimental animals.

Article 28 [Transport Welfare] When transporting experimental animals, necessary measures shall be taken to meet the welfare requirements of experimental animals during transportation.

Materials

BabI/c mice were purchased from Sibeifu (Beijing) Biotechnology Co., Ltd

200 μ L of 5% red blood cell suspension from Shanghai Blood Biomedical Co., Ltd

lentivirus-ABO drugs from Beijing Likeli Biological Company

Establishment of a mouse model containing blood group antibodies

- 1 Four-week-old female Babl/c mice were purchased from Sibeifu (Beijing) Biotechnology Co., Ltd. and kept in SPF-grade cages in the Experimental Animal Center of Chifeng Municipal Hospital, with a maximum of 5 mice per cage.
- 2 200 μ L of 5% red blood cell suspension from Shanghai Blood Biomedical Co., Ltd. was injected intraperitoneally once a week for 3 consecutive weeks.
- 3 The mice were killed in the fourth week, and whole blood was collected from the mice by eye removal, and peripheral serum was collected.
- 4 Five days after the tumor cell line (2×10^5 /mouse) was inoculated in the mouse armpit, local injection of lentivirus-ABO drugs (1×10^7 /mouse, 200 μ L) was started, once every 2 days, and the empty virus was used as the control group.
- 5 In order to prevent the virus drug from entering the blood circulation and reducing the efficacy, the injection method was selected to be carried out around the tumor and multiple points.
- 6 To ensure the welfare of the mice, when the tumor volume reached 1000mm³ or the maximum tumor diameter reached 15mm or tumor ulcers appeared, the mice were immediately killed by cervical dislocation.
- 7 The length and width of the mouse tumor were measured and recorded, and the tumor volume was calculated. The specific formula is: $V = \text{length} \times \text{width}^2 \times 0.50$.

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